Synology

Synology DiskStation User's Guide

Based on DSM 3.0-1308

Document ID 100920DSMUGENU

Applied Models

DS111	DS110+	DS110j	DS211	DS211j
DS710+	DS210+	DS411+	DS411j	DS410
DS409slim	DS1010+	RS409	RS810+	RS810RP+

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Introduction

Congratulations on your purchase of Synology DiskStation. Synology DiskStation is a multi-functional Network-Attached Storage server, serving as a file-sharing center within your Intranet. Moreover, it is specially designed for a variety of purpose, allowing you to perform the following tasks with the web-based Synology DiskStation Manager:

Store and Share Files over the Internet

Windows users, Mac users, and Linux users can easily share files within the Intranet or through the Internet. Unicode language support makes sharing files in different languages from Synology DiskStation simple.

Transfer Files via FTP

Synology DiskStation provides FTP service with bandwidth restriction and anonymous login. To transfer data safely, FTP over SSL/TLS and uninvited IP auto-block are also available.

Manage Files with Web-Based File Browser

One of Synology DiskStation Manager's applications, File Browser, can make it possible for users to manage their files on Synology DiskStation easily through a web interface. If you want to manage DiskStation files through a customized port, File Station is also available. You can also access the files stored on Synology DiskStation with a mobile device.

Share Storage Capacity as iSCSI Target

You can designate portion of your Synology DiskStation volume space to be an iSCSI Target, which will allow the iSCSI initiator to access the space like a local disk.

Back Up Files on Computer and Server

Synology DiskStation provides various backup solutions to back up computer data to Synology DiskStation, back up Synology DiskStation data to an external hard drive, another Synology DiskStation, an rsync-compatible server, or Amazon S3 server.

Enjoy Entertainment Content on the Server

Download Station allows you to download files from the Internet through BitTorrent, FTP, HTTP, eMule and NZB to Synology DiskStation. Moreover, if you have an UPnP DMA connected in the LAN, you can share the multimedia files on Synology DiskStation[1]. If you just want to share and play music files stored on Synology DiskStation, you can enable iTunes Service, and enjoy the music through any iTunes clients on LAN.

The built-in USBCopy button on the device allows instant copy of files from the camera to Synology DiskStation.[2]

Share Photos, Videos, and Blogs with Photo Station

Photo Station gives you the freedom to share photos and videos over the Internet without complicated upload steps. Album control ensures the content is shared with the right persons. Visitors can leave comments for your photos. Furthermore, a brand new blogging system is integrated for you to easily share your life and thoughts over the Internet.

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[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

[2] USBCopy is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

Enjoy Music Anytime and Anywhere

Audio Station allows you to listen to music stored on the Synology DiskStation, from a connected iPod, or even stream Internet Radio stations. In addition, you can stream music from the Synology DiskStation with a web browser over the Internet.

Host Websites

The Virtual Host feature allows you to host up to 30 websites using Web Station, with PHP and MySQL supported.

Record Videos with IP Cameras

Surveillance Station allows you to manage, view, and record videos from multiple IP cameras over the network. By accessing the web-based management interface of Surveillance Station, you can watch the real-time image the camera is monitoring, and record videos continuously, in motion-detection mode, or in alarm-recording mode.

USB Printer Server

You can share up to 2 USB 2.0 Printers through the LAN.[1]

Online Resources

Click on the links to obtain Synology's online resources.

- **FAQ:** www.synology.com/support/faq.php
- **Wiki:** forum.synology.com/wiki
- **Forum:** forum.synology.com
- **Download Center:** www.synology.com/support/download.php
- **Technical Support:** www.synology.com/support/support_form.php

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

Chapter 1

Synology DiskStation at a Glance

1-Bay & 2-Bay Models

Most Models

No.	Article Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	USBCopy Button	Front Panel	The USBCopy Button lights up when you connect a USB Device (for example: digital camera, USB flash disk) to the USB port on the front panel. Pressing the button will copy the data from the connected USB device to Synology DiskStation's internal HDD.
4)	USB Port	Front & Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
5)	eSATA Port[1]	Front Panel	The eSATA port is for connecting with an external SATA HDD.
6)	Fan	Back Panel	The fan is built to exhaust waste heat out of Synology DiskStation. It will start automatically when the server starts. If the fan is malfunctioning, system will beep every 1 second.

[1] eSATA Port is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

No.	Article Name	Location	Description
7)	RESET Button	Back Panel	1.To restore IP, DNS, passwords for the admin account to default value. 2.To reinstall the Synology DiskStation.
8)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.
9)	Power Port	Back Panel	The power port is where you connect the AC adapter to Synology DiskStation.

DS710+

No.	Article Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	USBCopy Button	Front Panel	The USBCopy Button lights up when you connect a USB Device (for example: digital camera, USB flash disk) to the USB port on the front panel. Pressing the button will copy the data from the connected USB device to Synology DiskStation's internal HDD.
4)	USB Port	Front & Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
5)	eSATA Port	Back Panel	The eSATA port is for connecting with an external SATA HDD.
6)	RESET Button	Back Panel	1.To restore IP, DNS, passwords for the admin account to default value. 2.To reinstall the Synology DiskStation.
7)	Hard Drive Tray	Back Panel	The hard drive tray is designed for loading the hard drives used in Synology DiskStation.
8)	Hard Drive Tray Lock	Back Panel	Each hard drive tray is equipped with one tray lock to lock or unlock the trays to the DiskStation.
9)	VGA Port	Back Panel	This port is used for manufacturing use only.
10)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.

No.	Article Name	Location	Description
11)	Power Port	Back Panel	The power port is where you connect the AC adapter to Synology DiskStation.

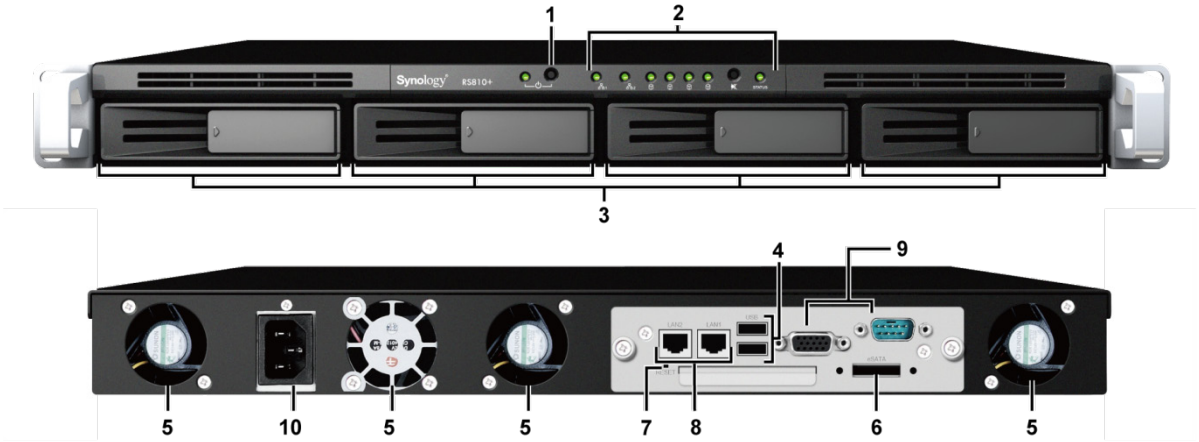
4-Bay Models

DiskStation

No.	Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	USB Port	Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
4)	Fan	Back Panel	The fan is built to exhaust waste heat out of Synology DiskStation. It will start automatically when the server starts. If the fan is malfunctioning, system will beep every 1 second.
5)	eSATA Port[1]	Back Panel	The eSATA port is for connecting with an external SATA HDD.
6)	RESET Button	Back Panel	1.To restore IP, DNS, passwords for the admin account to default value. 2.To reinstall the Synology DiskStation.
7)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.
8)	Power Port	Back Panel	The power port is where you connect the AC adapter to Synology DiskStation.

[1] eSATA Port is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

1U RackStation



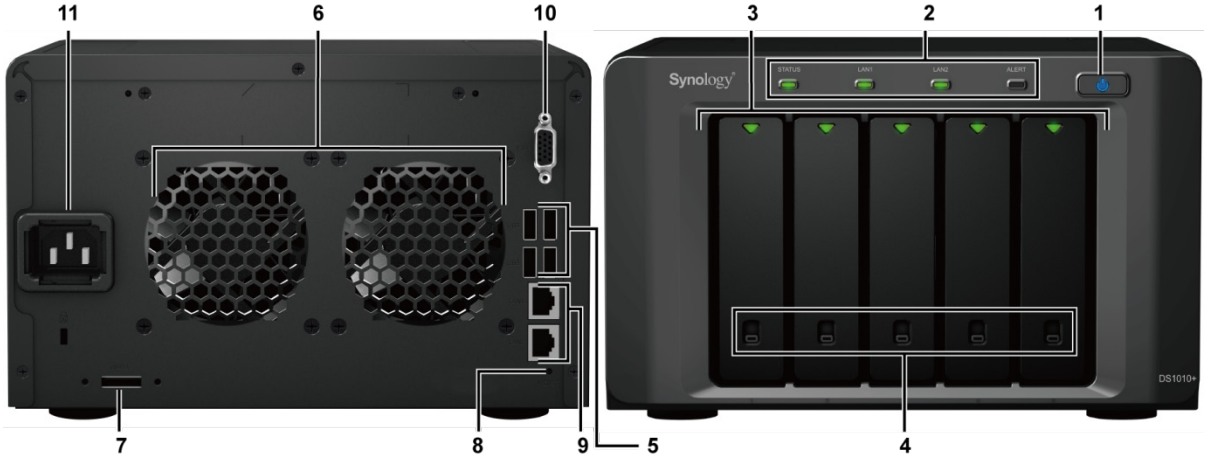
No.	Article Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	Hard Drive Tray	Front Panel	The hard drive tray is designed for loading the hard drives used in Synology DiskStation.
4)	USB Port	Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
5)	Fan	Back Panel	The fan is built to exhaust waste heat out of Synology DiskStation. It will start automatically when the server starts. If the fan is malfunctioning, system will beep every 1 second.
6)	eSATA Port	Back Panel	The eSATA port is for connecting with an external SATA HDD.
7)	RESET Button	Back Panel	1. To restore IP, DNS, passwords for the admin account to default value. 2. To reinstall the Synology DiskStation.
8)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.
9)	Console Port & VGA Port	Back Panel	This port is used for manufacturing use only.
10)	Power Port	Back Panel	The power port is where you connect the AC adapter to Synology DiskStation.

DS409slim

No.	Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	USBCopy Button	Front Panel	The USBCopy Button lights up when you connect a USB Device (for example: digital camera, USB flash disk) to the USB port on the front panel. Pressing the button will copy the data from the connected USB device to Synology DiskStation's internal HDD.
4)	USB Port	Front & Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
5)	eSATA Port	Back Panel	The eSATA port is for connecting with an external SATA HDD.
6)	RESET Button	Back Panel	1.To restore IP, DNS, passwords for the admin account to default value. 2.To reinstall the Synology DiskStation.
7)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.
8)	Hard Drive Tray	Back Panel	The hard drive tray is designed for loading the hard drives used in Synology DiskStation.
9)	Power Port	Back Panel	The power port is where you connect the AC adapter to Synology DiskStation.

5-Bay Models

DS1010+



No.	Article Name	Location	Description
1)	Power Button	Front Panel	The Power Button is used to turn Synology DiskStation on or off. To turn off Synology DiskStation, press the Power Button and hold it until you hear a beep sound and the Power LED starts blinking.
2)	LED Indicators	Front Panel	The LED indicator is used to display the status of the internal disk and the system. For more information, see "Appendix B: LED Indication Tables" on Page 179.
3)	Hard Drive Tray	Front Panel	The hard drive tray is designed for loading the hard drives used in Synology DiskStation.
4)	Hard Drive Tray Lock	Front Panel	Each hard drive tray is equipped with one tray lock to lock/unlock the trays to the DiskStation.
5)	USB Port	Back Panel	The Synology DiskStation offers USB ports for adding additional external hard drives, USB printers, or other USB devices.
6)	Fan	Back Panel	The fan is built to exhaust waste heat out of Synology DiskStation. It will start automatically when the server starts. If the fan is malfunctioning, system will beep every 1 second.
7)	eSATA Port	Back Panel	The eSATA port is for connecting with an external SATA HDD.
8)	RESET Button	Back Panel	1.To restore IP, DNS, passwords for the admin account to default value. 2.To reinstall the Synology DiskStation.
9)	LAN Port	Back Panel	The LAN port is where you connect RJ-45 cable to Synology DiskStation.
10)	VGA Port	Back Panel	This port is used for manufacturing use only.
11)	Power Port	Back Panel	The power port is where you connect the power cord to Synology DiskStation.

Chapter 2

Get Started with Synology DiskStation Manager

This Chapter explains how to log in to Synology DiskStation's web-based management UI, **Synology DiskStation Manager (DSM)**, customize your own desktop, manage its taskbar, and use the **Main Menu** to access DSM settings and applications.

Install Synology DiskStation

For more information setting up Synology DiskStation and installing DSM, see the **Quick Installation Guide** that came with your installation CD or DVD.

Log in to Synology DiskStation Manager

You can log in to DSM with Synology Assistant or with a web browser.

Use Synology Assistant

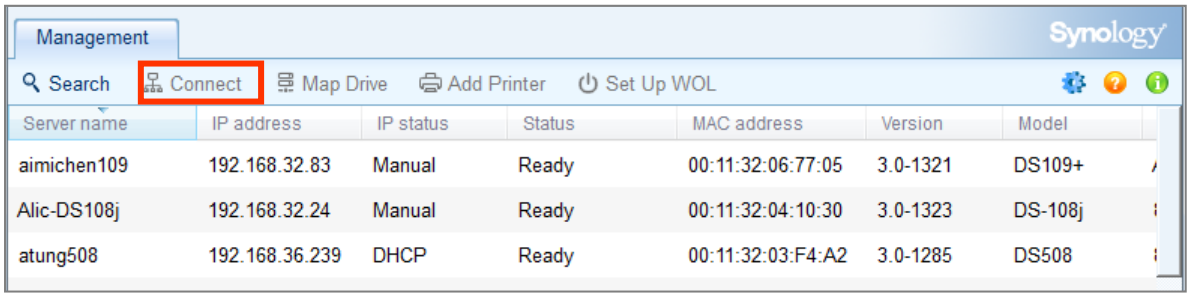
Windows User:

1 Insert the Installation CD or DVD into the CD/DVD-Rom Drive of your computer.

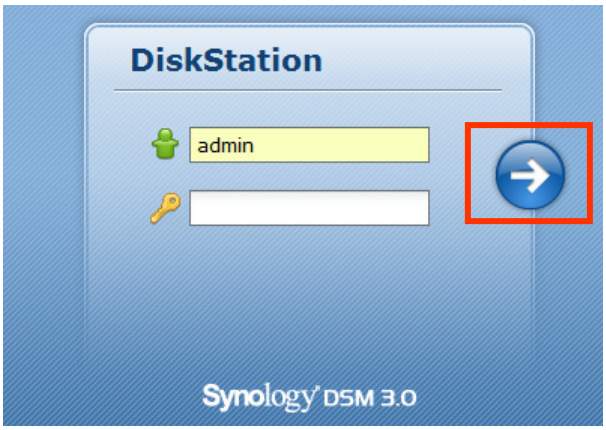
2 Choose **Install** from the autorun menu and follow the steps to complete installation.

3 After installation, double-click the desktop icon to launch Synology Assistant.

4 Choose the server you want to manage. Click **Connect** or double-click the selected server to go to DSM's login screen.



5 Enter your user name and password, and click **Login**. The default password for **admin** is empty.

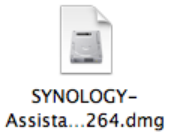


Mac OS X User:

1 Insert the Installation CD into CD/DVD-Rom Drive.

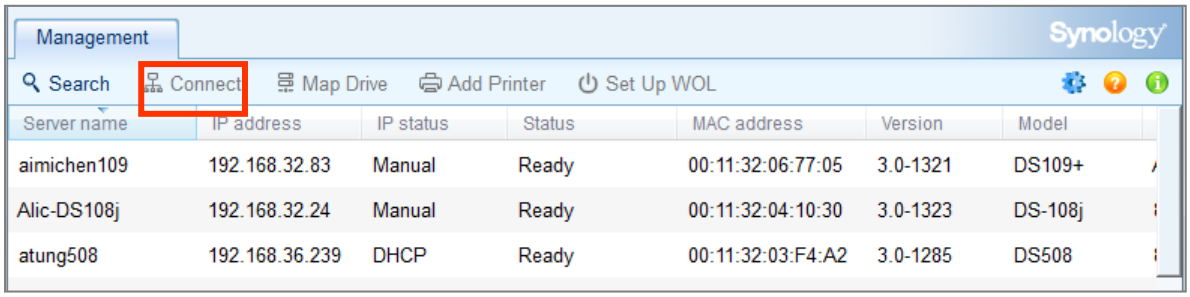
2 Double-click the CD-Rom Drive icon on the desktop.

3 Double-click the **MacOSX** icon, and then double-click the **Synology Assistant-SYNOLOGY.dmg** icon.

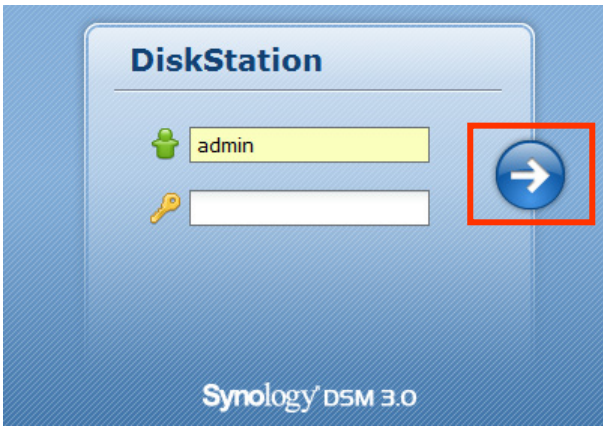


4 Double-click the **Synology Assistant** icon to run setup wizard.

5 Choose the server you want to manage. Click **Connect** or double-click the selected server to go to DSM's login screen.



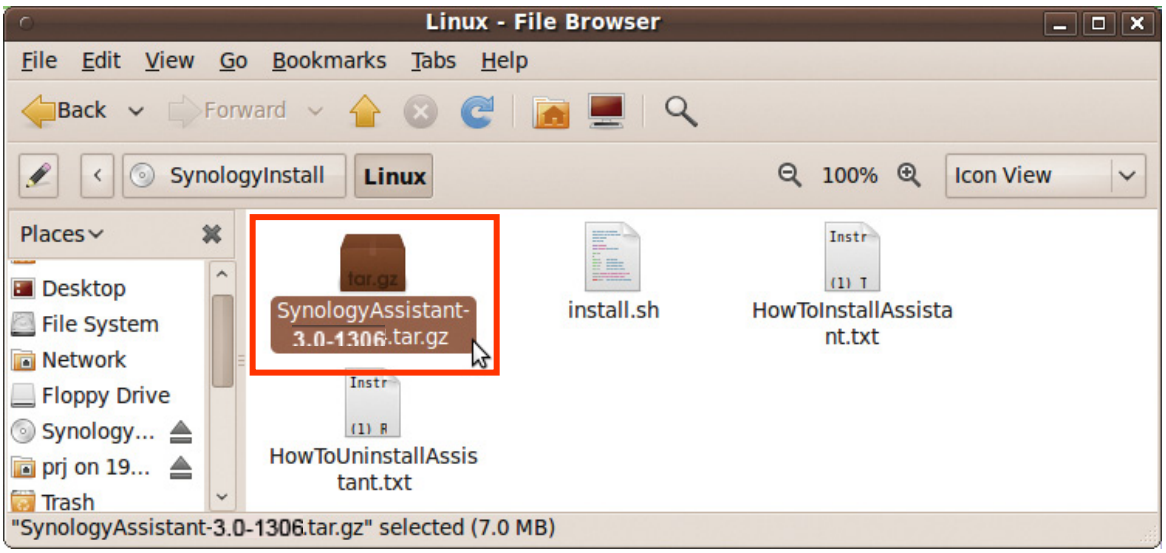
6 Enter your user name and password, and click **Login**. The default password for **admin** is empty.



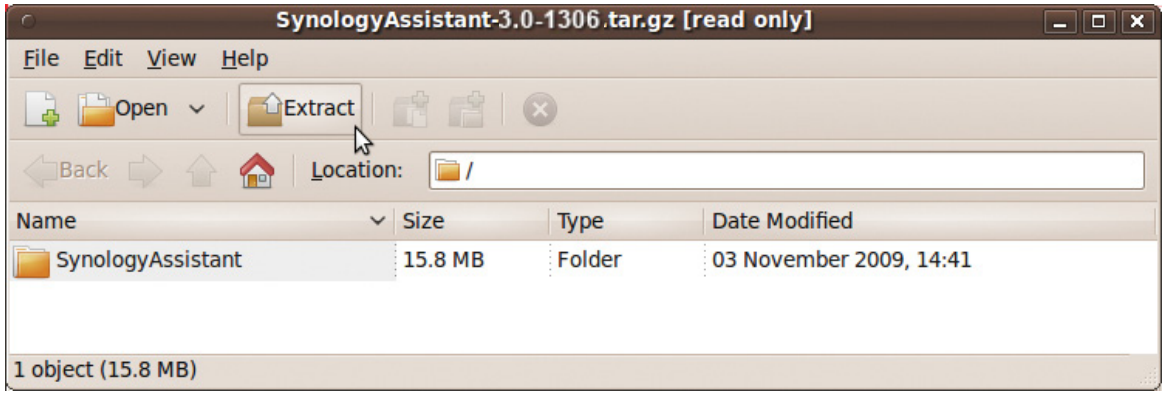
Linux (Ubuntu) User:

1 Insert the installation CD into your computer, and then double-click the **SynologyInstall** icon on the desktop.

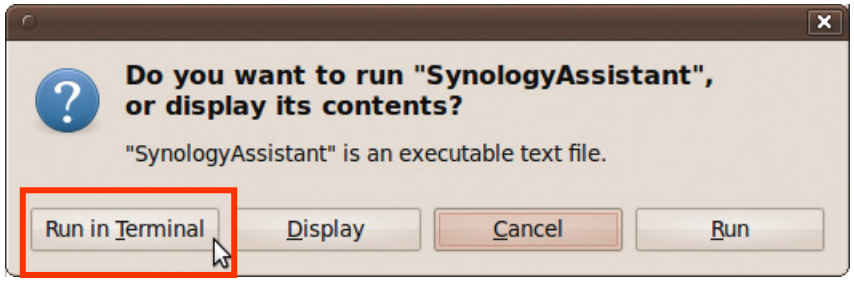
2 In the **File Browser** window that appears, double-click the **Linux** folder, and then double-click **Synology Assistant-3.0-[number].tar.gz**.



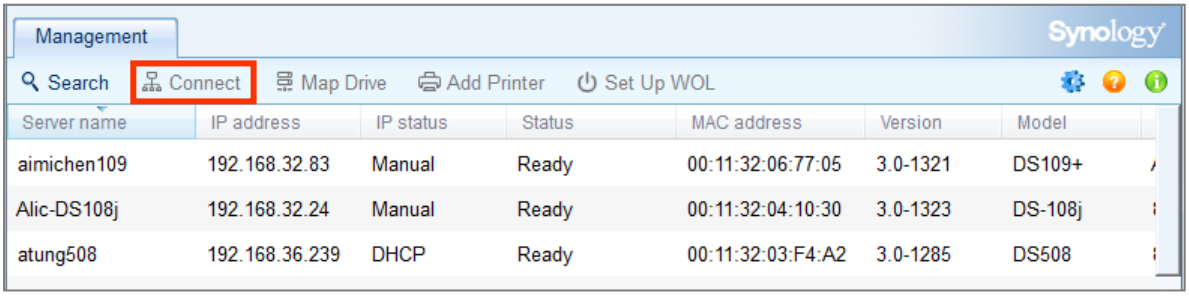
3 Click **Extract**, and then extract the **SynologyAssistant** directory to the path **/usr/local** or any other path.



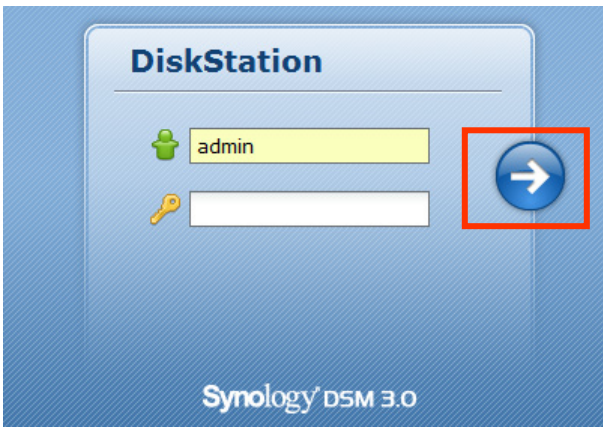
4 Go to the path **/usr/local/SynologyAssistant** (or **[the path you just specified]/SynologyAssistant**), double-click **SynologyAssistant**, and then select **Run in Terminal** in the dialog box that appears.



5 Choose the server you want to manage. Click **Connect** or double-click the selected server to go to DSM's login screen.



6 Enter your user name and password, and click **Login**. The default password for **admin** is empty.



Note: To ensure the process runs smoothly, please use the following browsers.

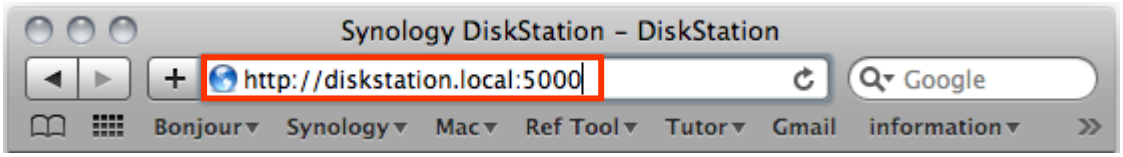
- **Chrome:** 5.0 or later
- **Firefox:** 3.5 or later
- **Safari:** 4.0 or later
- **Internet Explorer:** 7.0 or later

Use a Web Browser

1 Open a web browser window.

2 In the address field, enter any of the following:
- **http://Synology_Server_IP:5000**
- **http://Synology_Server_Name:5000/** (or **http://Synology_Server_Name.local:5000/** on a Mac)

Synology_Server_Name should be replaced with the name you set up for Synology DiskStation during the setup process. If you choose **One-step Setup** during the setup process, the **Synology_Server_Name** will be **DiskStation**, **CubeStation**, **USBStation**, or **RackStation**.



3 Press Enter (PC) or Return (Mac) on your keyboard.

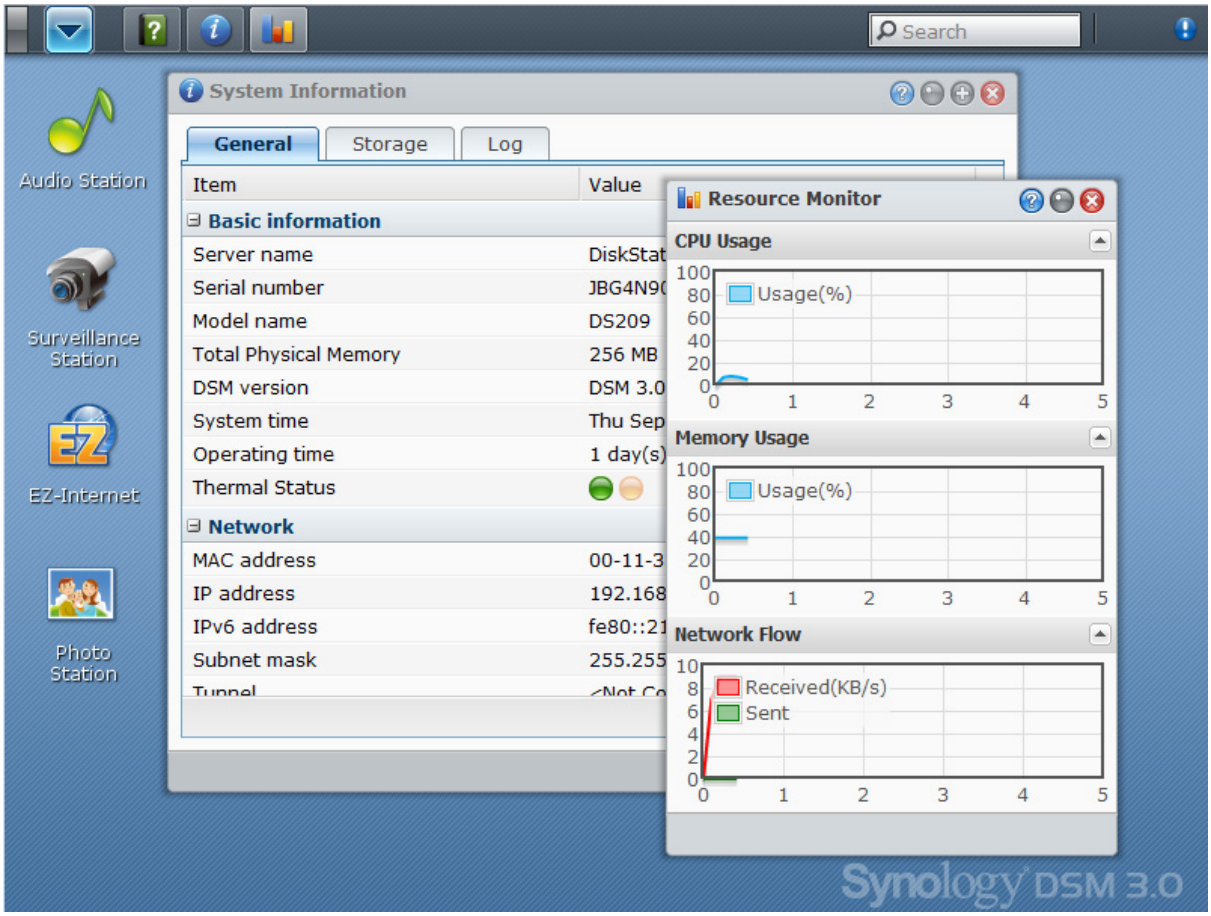
4 Enter your user name and password, and click **Login**. The default password for **admin** is empty.

DiskStation Manager Appearance

When you log in to Synology DiskStation Manager (DSM), you can see the desktop and the taskbar.

Desktop and Shortcuts

The desktop is where your application windows are displayed. You can also create desktop shortcuts to frequently used applications.



To create a desktop shortcut to an application:

Drag its thumbnail from the **Main Menu** to the desktop.

To remove a desktop shortcut to an application:

Right-click the shortcut and choose **Remove shortcut**.

To open Audio Station or Download Station in a new browser window:

1 Create a desktop shortcut to **Audio Station** or **Download Station**.

2 Right-click the shortcut and choose **Open in New Window**.

> ***Note:*** You can also customize your desktop background color or wallpaper with the **Customize My Desktop** function. See "Customize My Desktop" on Page 21 for more information.

Taskbar

The taskbar at the top of the desktop contains the following functions:

1 **The Show Desktop button:** Click to clear your application windows and reveal the desktop. Click again to bring the windows back to the desktop. For more information about application windows, see "Open Application Windows" on Page 20.

2 **The Main Menu button:** Click to reveal the **Main Menu**. See "Manage DSM with the Main Menu" on Page 19 for more information.

3 **The icons of open applications:**

- Click the icon of an application to show or hide its window on the desktop.
- Right-click the icon and choose from the shortcut menu to manage the application window (**Maximize**, **Minimize**, **Restore**, **Close**) or its taskbar icon (**Pin to Taskbar**, **Unpin from Taskbar**).

4 **The search field:** Enter keywords to quickly find a list of relevant applications and **DSM 3.0 Help** articles.

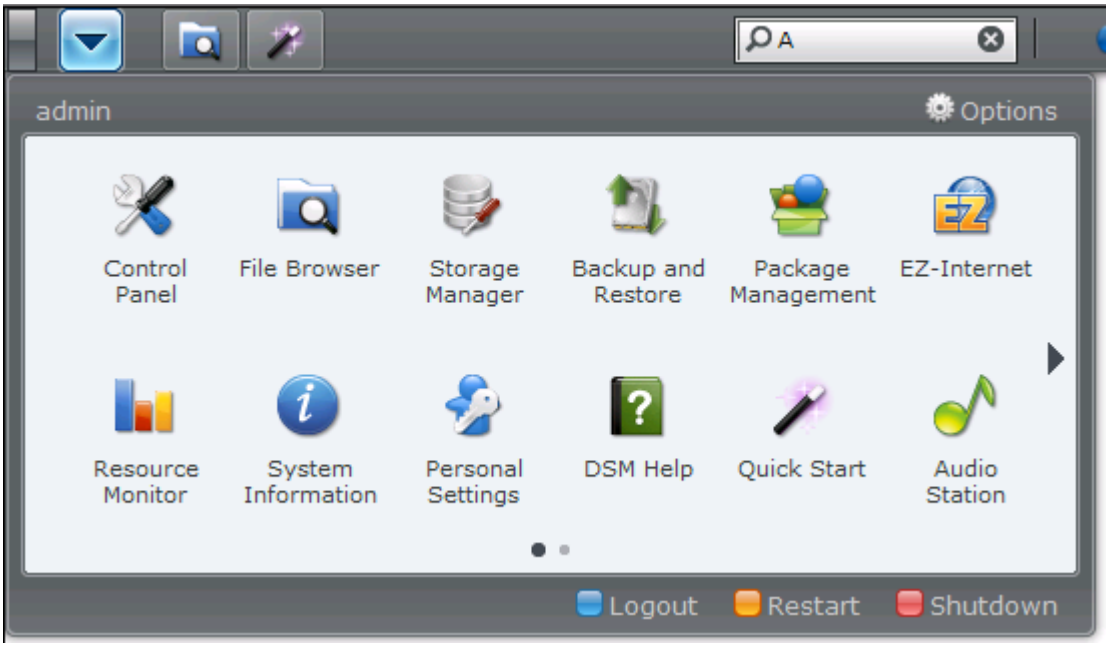
5 **The Notification button (with an exclamation mark):** Click to check the logs of important events. Click **Clear All** to remove all events and hide the **Notification** button.

> ***Note:*** For more information about system log, see "Check Logs" on Page 163.

6 **The Upload Queue button:** Click to open the **File Task Monitor** window, where you can check the progress of all uploading and background tasks.

Manage DSM with the Main Menu

The **Main Menu** is where you can find all the applications and settings provided by Synology DiskStation Manager.



Logout, Restart, and Shutdown

Click **Logout**, **Restart**, or **Shutdown** at the bottom-right corner of the **Main Menu** to log out of DSM, restart DiskStation, or turn it off, just like using any other operating systems.

Manage DSM Options

Click the **Options** button at the top-right corner of **Main Menu** to enhance DSM's browsing security. See "Enhance Browsing Security" on Page 53 for more information.

Open Application Windows

In addition to the **Control Panel**, the **Main Menu** contains the thumbnails of all the other DSM applications. With DSM's multitasking ability, now you can open multiple application windows at the same time.

To open an application window:

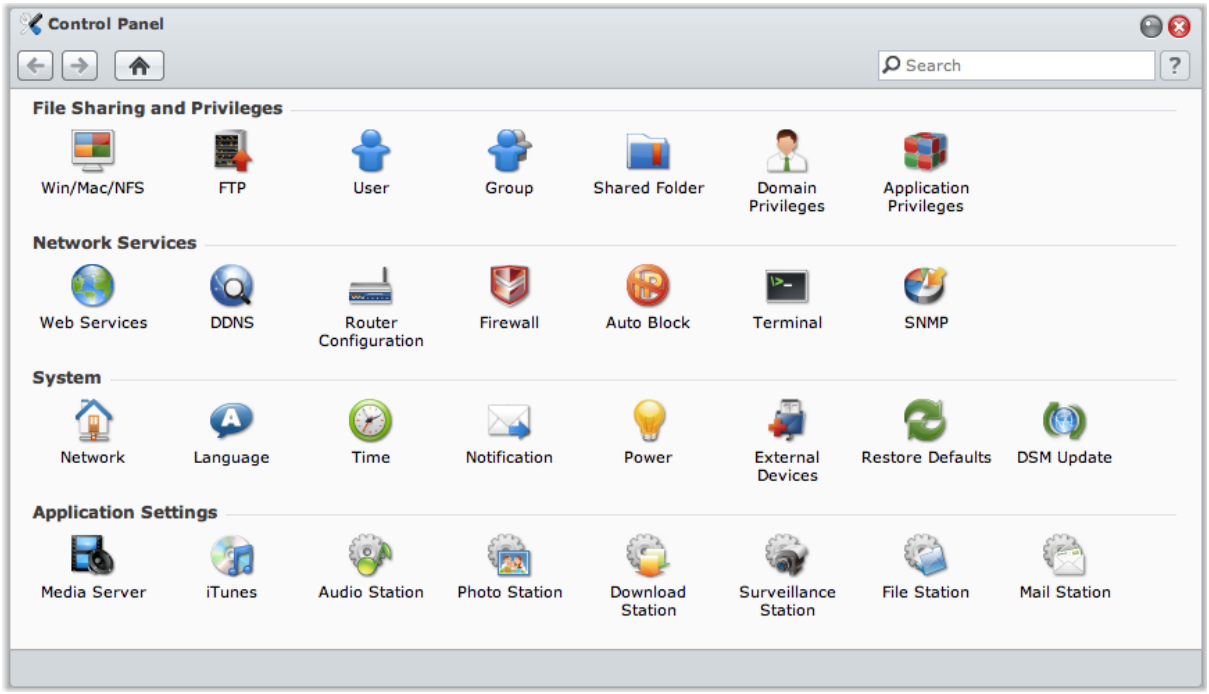
Click any thumbnail of an application from the **Main Menu** to open the application window on the desktop and the application icon on the taskbar.

Note:

- You can scroll to the next page of the **Main Menu** by clicking the right arrow on the right or with your mouse scroll. The dots at the bottom of the **Main Menu** will tell you which page is displayed now.
- You can also open application windows through desktop shortcuts. See "Desktop and Shortcuts" on Page 18 for more information.

Use the Control Panel

Choose **Control Panel** from the **Main menu** to see the thumbnails of DSM settings.



The DSM settings on the Control Panel are grouped into the following categories:

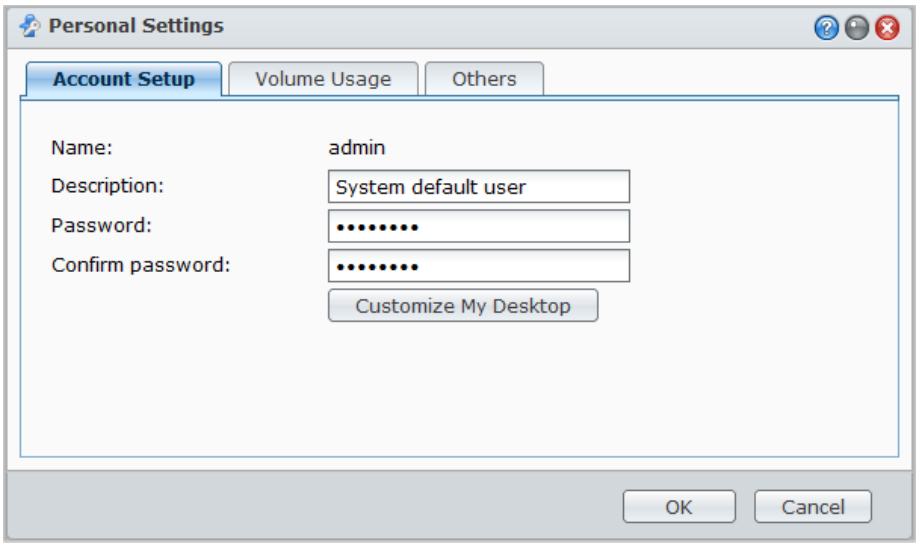
- **File Sharing and Privileges**: Set up Win/Mac/NFS file sharing service, and assign application privileges for user accounts.
- **Network Services**: Manage and edit the settings for network services and Internet connection.
- **System**: Edit the basic settings on your DiskStation.
- **Application Settings**: Enable the services of built-in applications.

Manage Personal Settings

Go to **Main Menu** > **Personal Settings** to manage your account, desktop, and view your quota usage in one central and convenient location.

Modify My Account

Under **Account Setup**, you can change your account's password and description.



To modify your account:

1 Enter a description for your account (optional).

2 If you want to change your account's password, enter the new one and confirm it.

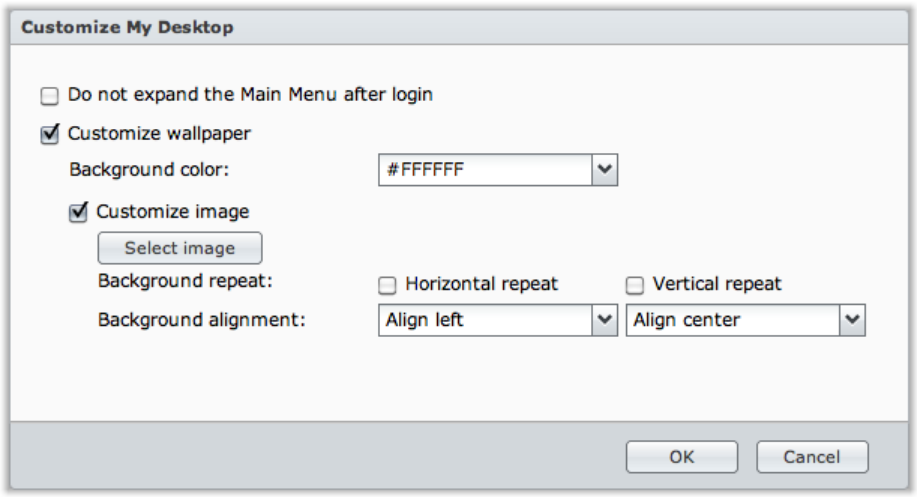
3 Click **OK**.

Limitations:

- The user description is case sensitive and can be 0 to 64 displayable Unicode characters.
- The password is case sensitive and should be 0 to 127 displayable characters, including letters, numbers, signs, and space.

Customize My Desktop

Under **Account Setup**, click **Customize My Desktop** to customize desktop background color or wallpaper.



To decide not to expand the Main Menu after login:

1 Tick **Do not expand the Main Menu after login**.

2 Click **OK**.

To choose a background color for your desktop:

1 Tick **Customize Wallpaper**.

2 Choose a color from the **Background color** drop-down menu, or enter your own color value.

3 Click **OK**.

To upload a customized image that will be used as your desktop wallpaper:

1 Tick **Customize Wallpaper** and then tick **Customize image**.

2 Click **Select image** to upload an image that will be used as your DSM's desktop wallpaper. In the dialog that opens, do the following and then click **OK**:

a Select an image located on DiskStation or your computer.

b If you want to resize the image to a certain width or height, enter the values in the **Scale to fit** field.

> ***Note:*** The maximum length must be less than 3280 pixels.

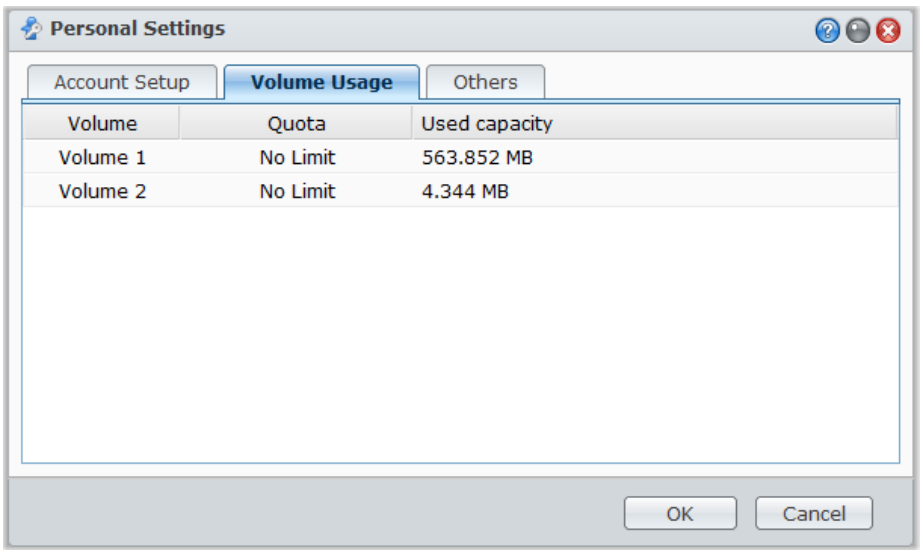
3 If you want to repeat your desktop wallpaper horizontally or vertically, tick **Horizontal repeat** or **Vertical repeat**.

4 If you want to adjust the alignment of your desktop wallpaper, choose the options from the **Background alignment** drop-down menu.

5 Click **OK**.

Check Volume Usage

Under **Volume Usage**, you can view your quota on all the DiskStation volumes set by admin, as well as the amount of capacity you have used on each volume.



Chapter 3

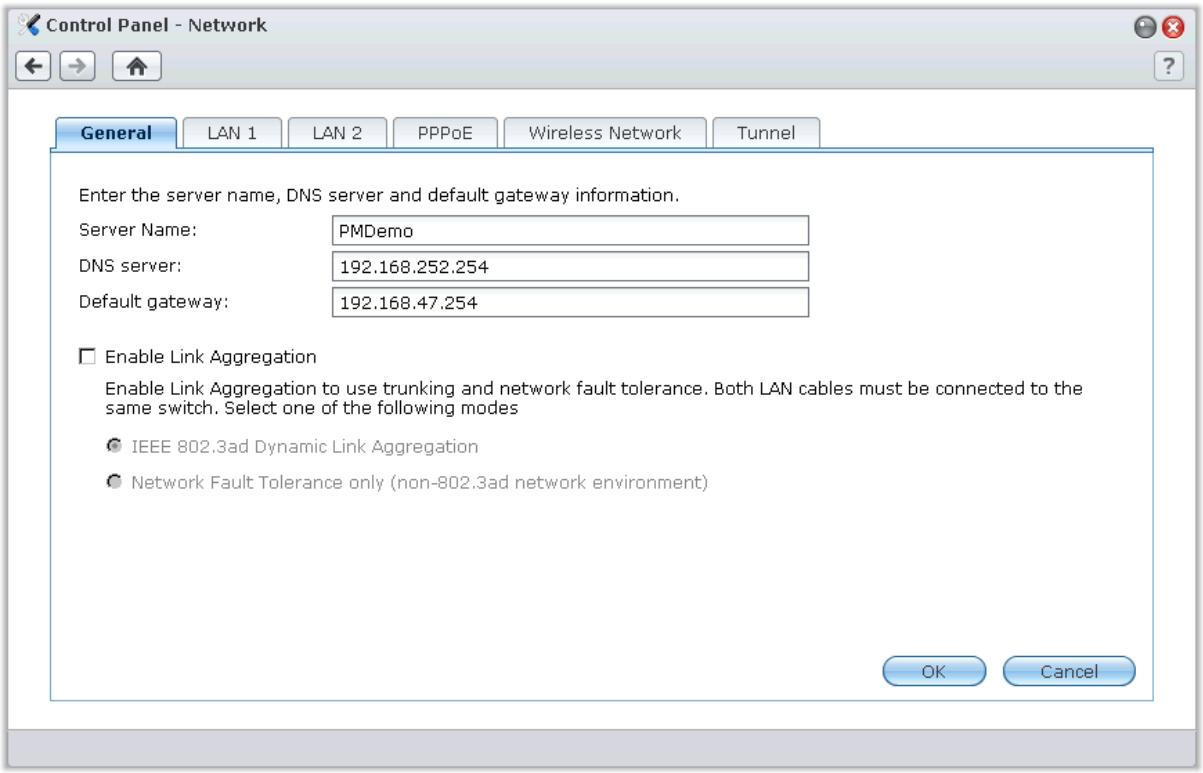
Modify System Settings

After you have connected to Synology DiskStation Manager (DSM) and learned how to access its functions and customize its appearance, you can begin to modify its basic settings.

This chapter explains how to change the network settings, specify default languages, set up time, and use energy saving features.

Change Network Settings

Go to **Main Menu** > **Control Panel** > **Network** to modify the network settings of your Synology DiskStation. You can choose between **LAN**, **PPPoE**, and **Wireless Network**, depending on your network environment.[1]



LAN

In this section, you can change your DiskStation identification on the network by entering a server name. You can also decide how your Synology DiskStation obtains its IP address here.

To rename DiskStation:

Enter the new server name in the **Server Name** field, and click **OK**.

To decide how your DiskStation obtain IP address:

- **Get network configuration automatically (DHCP)**: Get IP address automatically via DHCP.
- **Use manual configuration**: Manually enter the IP address, subnet mask, DNS, and gateway.

[1] For 2-LAN models, the **LAN** tab is divided into **General**, **LAN1**, and **LAN 2**.

Term Explanation
Jumbo Frames are Ethernet frames with more than the standard 1500 bytes of Maximum Transmission Unit (MTU), allowing Ethernet transmission of large files to be more efficient. It can only be enabled under Gigabit network environment. To ensure Jumbo Frame works properly, all the computers and devices across the network accessing your DiskStation must support it and use the same MTU value.

Link Aggregation

Under the **General** tab, you can set your DiskStation to connect two LAN cables to the network at the same time, or assign it with two IP addresses under different subnets.[1]

With Link Aggregation enabled, trunking and network fault tolerances are supported.

Before you enable Link Aggregation:

Please make sure both LAN cables are connected to the same switch.

To enable Link Aggregation:

1 Tick **Enable Link Aggregation**.

2 Choose any of the following modes:

- **IEEE 802.3ad Dynamic Link Aggregation**: IEEE 802.3ad is the standard for most Link Aggregation implementations. A switch with 802.3ad support is required to use in this mode.
- **Network Fault Tolerance only**: If the LAN 1 port becomes unavailable, the system will use LAN 2 to provide service. You can select this option if your switch does not support IEEE 802.3ad.

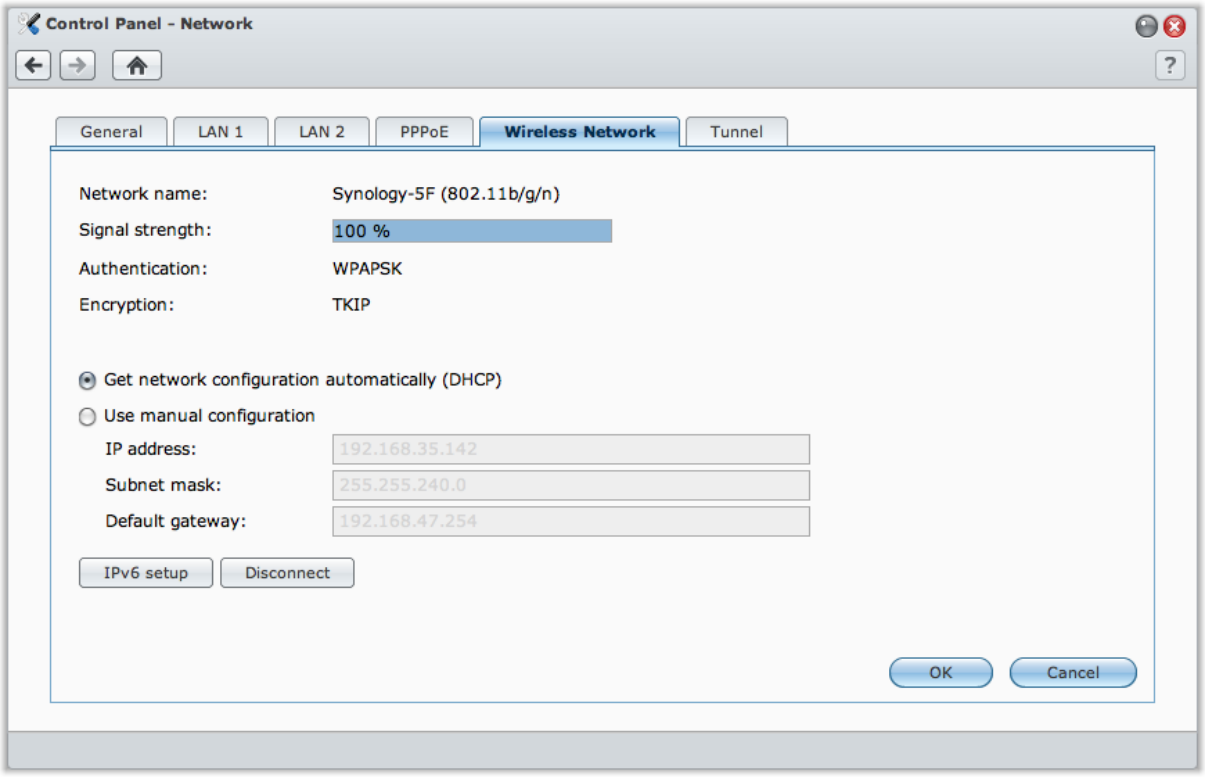
3 Click **OK**.

[1] Link Aggregation is only supported on DiskStations with 2 LAN ports.

Wireless Network

Click the **Wireless Network** tab to connect Synology DiskStation to a wireless network.[1]

> ***Note:*** Wireless network is available only when a wireless dongle is plugged into the USB port of your Synology DiskStation.



To set up a wireless network:

Click **Set up a wireless network** and choose from the following options (If you are already connected to a wireless network, click **Disconnect** first).

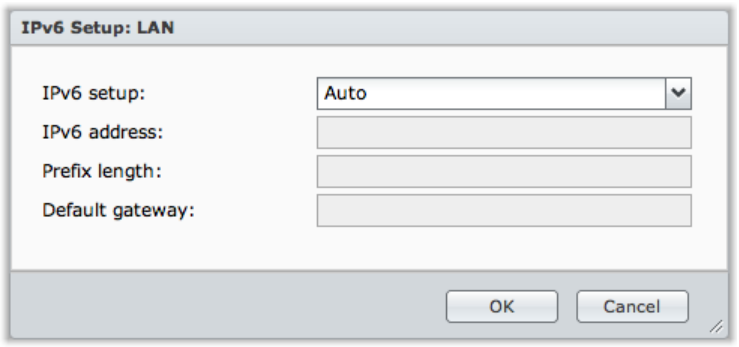
- **Join a wireless network**: The wizard will scan available wireless access points or Ad-Hoc networks with their signal strength and security status. If the access point you want to access is locked with password protection, the wizard will ask you to enter the password.
- **Connect to a hidden wireless network**: If an access point doesn't broadcast its SSID (Network Name) for privacy reason, it will not be discovered during the scanning. You can manually connect to those hidden access points by entering the required information manually.
- **Create an Ad-Hoc Network**: In addition to infrastructure network, in which a central access point (AP) bridges the wireless network to a wired Ethernet network, Ad-Hoc network is also widely used. In an Ad-Hoc network, all wireless devices within range of each other can communicate in a peer-to-peer fashion without a central access point. To set up an Ad-Hoc network, all wireless devices have to be configured for Ad-Hoc mode instead of the infrastructure mode.

> ***Note:*** For a list of compatible wireless dongles, visit www.synology.com.

[1] Wireless network is supported on specific models only.

IPv6 Setup

Click the **IPv6 Setup** button under the **LAN**[1] or **Wireless Network** tab to change the IPv6 settings.



Synology DiskStation supports IPv4/IPv6 dual stack scheme. This means that both IPv4 and IPv6 can work simultaneously on Synology DiskStation. The default settings for IPv6 is **Auto**.[2]

On the **IPv6 Setup** page, choose between the different setup types:

- **Auto**: DiskStation will automatically generate a local IPv6 address. This is generated based on DiskStation's MAC address.
- **DHCP**: DiskStation will automatically get an IPv6 address from the DHCP server which supports IPv6.
- **Manual**: Set up IPv6 manually by entering **IPv6 address**, **Prefix length**, and **Default gateway**.
- **Off**: Disable IPv6 support.

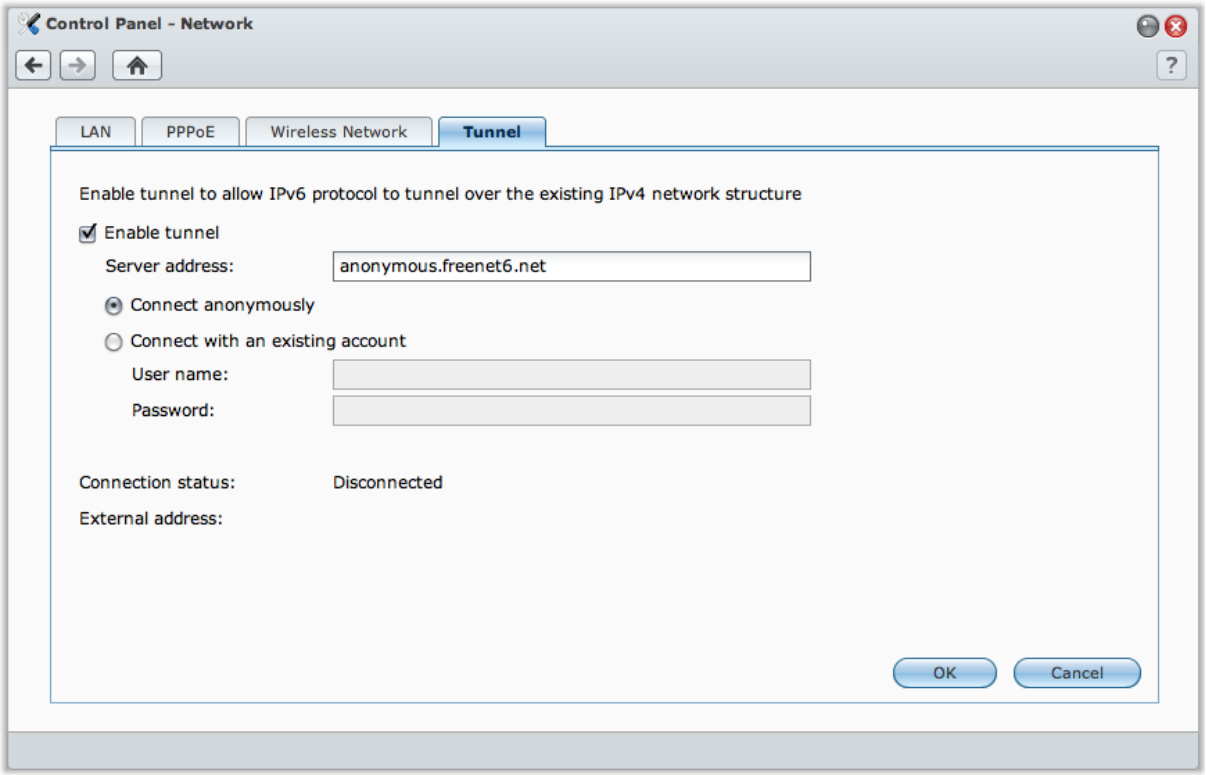
Note: If you want to join an IPv4 network environment with IPv6 address, you need to enable IPv6 Tunnel. See the section below for more information.

[1] For 2-LAN models, the **LAN** tab is divided into **General**, **LAN1**, and **LAN 2**.
[2] IPv6 service is only supported on 08-series models or later (excluding 108j, 109j).

Tunnel

Tunnel is a technique that encapsulates IPv6 packets within IPv4 packets, allowing isolated IPv6 host or network to be compatible with IPv4 network backbone.

Click the **Tunnel** tab to allow your DiskStation to gain Internet access via IPv6 under the IPv4 environment.



To setup IPv6 Tunnel:

1 Tick **Enable tunnel**.

2 In **Server address**, enter the hostname or the IP of the tunnel service provider.

3 Select if you want to **Connect anonymously** or **Connect with an existing account**. If you choose the latter, please also enter **User name** and **Password**.

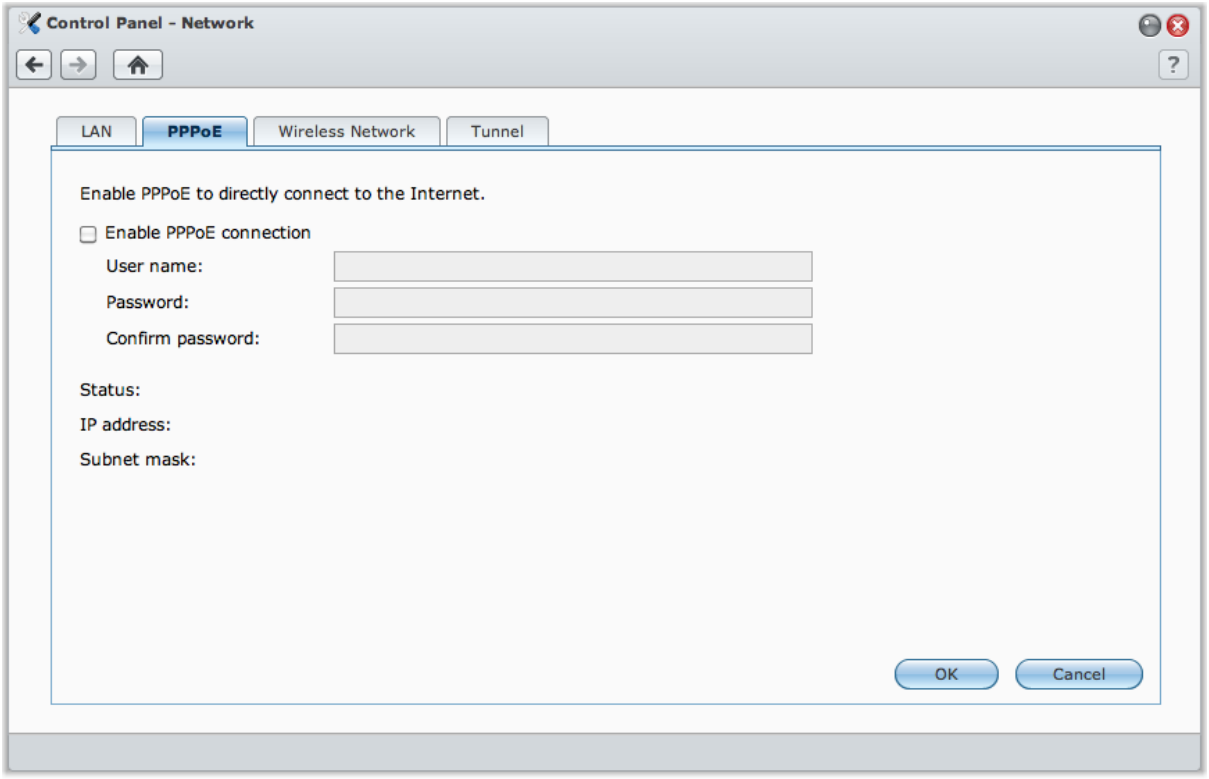
4 Click **OK** to save the settings.

Note:

- Your external IPv6 address may be automatically updated by the service provider. However, Synology DiskStation will not remove the old IPv6 address immediately.
- If you are still facing connection problems, contact your Internet Service Provider.

PPPoE

Click the **PPPoE** tab If your Synology DiskStation is connecting to a DSL or cable modem, and your Internet Service Provider (ISP) uses PPPoE (Point to Point Protocol over Ethernet).



To connect to the Internet via PPPoE:

1 Tick **Enable PPPoE Connection**.

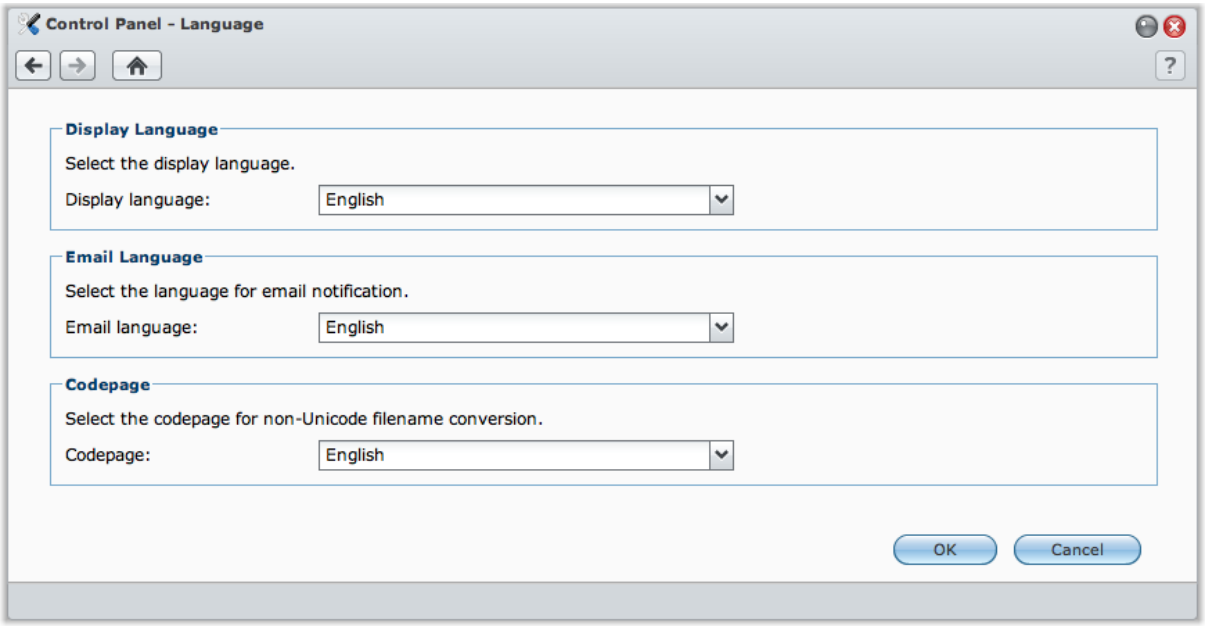
2 Enter the account information provided by your ISP.

3 Click **OK**.

> ***Note:*** If you are still facing connection problems, contact your Internet Service Provider.

Specify Default Languages

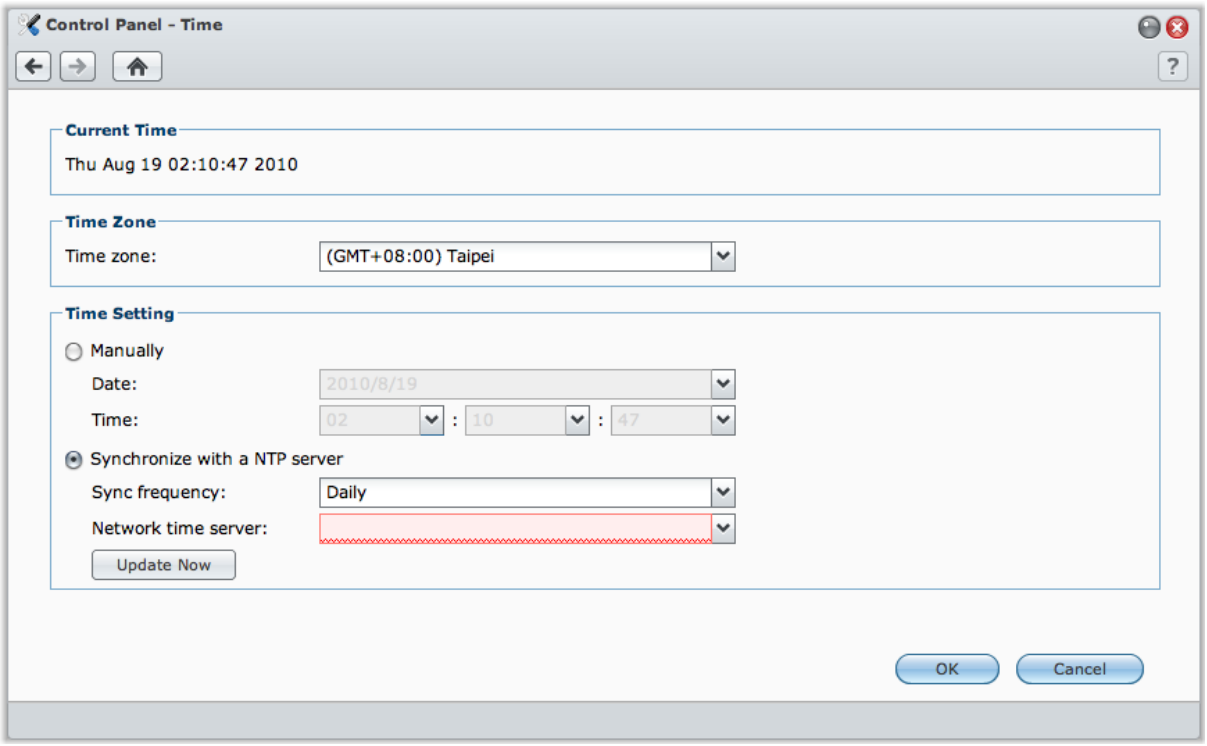
Go to **Main Menu** > **Control Panel** > **Language** to set the language for Synology DiskStation Manager, enable email notification, and specify the codepage for Unicode filename conversion.



- **Display Language**: Choose your preferred display language, or have it the same as your default browser setting.
- **Email Language**: Set your preferred language for email notification from Synology DiskStation.
- **Codepage**: Synology DiskStation uses Unicode to avoid file inaccessibility from computers using different languages. But for the following devices or applications to use Synology DiskStation services without problem, you need to choose the appropriate codepage for them:
  - Computers without Unicode support
  - Applications that convert non-Unicode strings to Unicode, such as FTP service, UPnP support, music metadata indexing

Set Up Time

Go to **Main Menu** > **Control Panel** > **Time** to set up the time. You can check the current time, manually set the server's date and time, or have them set automatically using a network time server.



To set the time zone:

1 Choose a time zone from the **Time zone** drop-down menu.

2 Click **OK**.

To set the date and time manually:

1 Choose **Manually** and select the date and time.

2 Click **OK**.

To sync the date and time with NTP server:

1 Make sure a valid DNS server IP has been entered at **Main Menu** > **Control Panel** > **Network** and that your DiskStation is connected to the Internet.

2 Choose **Synchronize with a NTP server**.

3 Assign a sync frequency from the drop-down menu.

4 Enter the address of your network time server, or choose a server from the drop-down menu.

5 Click **Update now** to make sure you can successfully synchronize time with the server.

6 Click **OK**.

More Information

Network Time Protocol (NTP) is used to synchronize the time of all clients and servers over a data network.

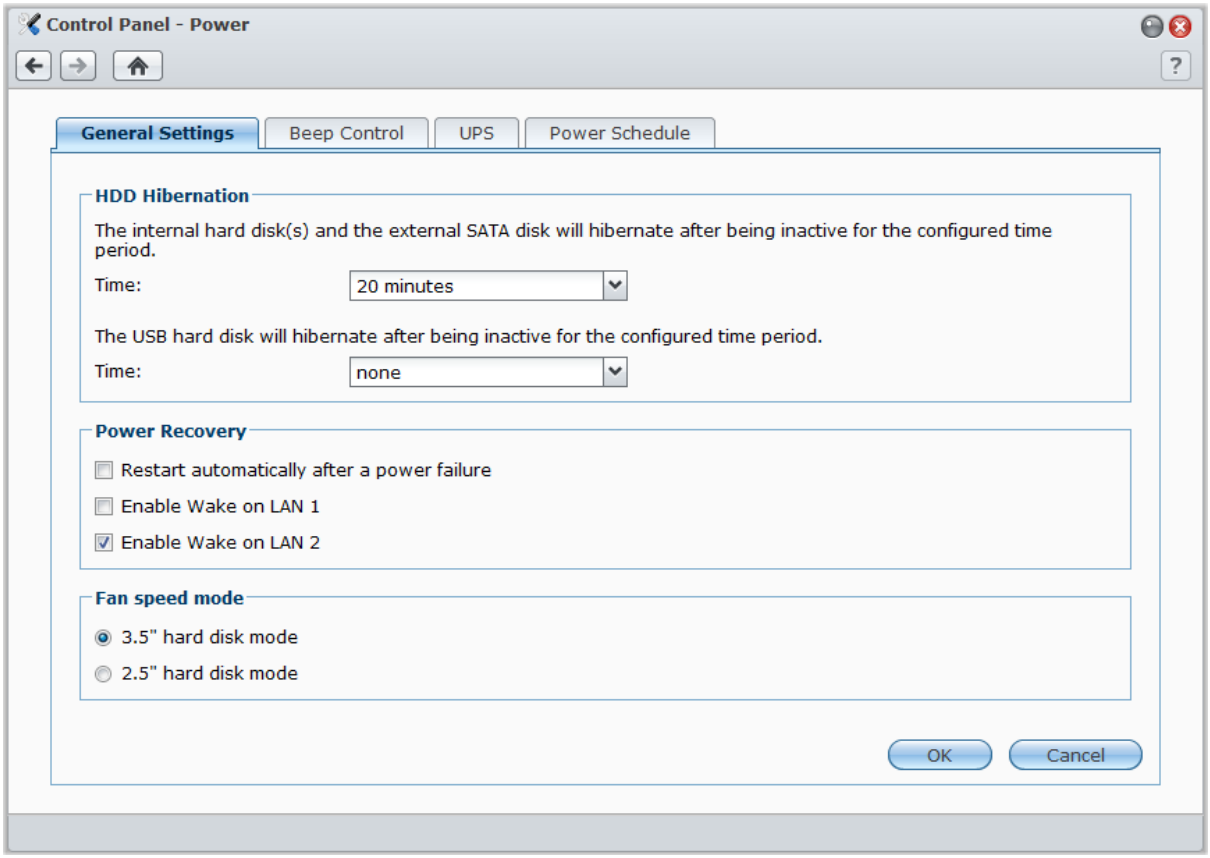
Below are a few recommended NTP servers:

- time.apple.com
- time.asia.apple.com
- time.euro.apple.com
- time.nist.gov
- time.windows.com

For more information about NTP Server, please visit http://www.eecis.udel.edu/~mills/ntp/servers.html

Use Energy Saving Features

Go to **Main Menu** > **Control Panel** > **Power** to manage the energy saving features provided by DSM, including HDD hibernation, power recovery, fan control, beep control, UPS support, and scheduled power on/off.

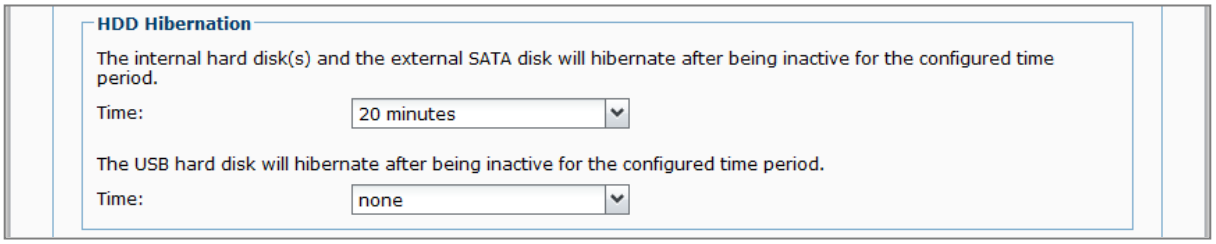


Manage General Settings

Click the **General Settings** tab to manage the following power control settings.

HDD Hibernation

You can manage HDD hibernation for all internal or external disks on your DiskStation.



When a disk enters HDD hibernation mode, it will stop spinning and become inactive, which not only saves energy but also extends the disk's lifespan.

To manage HDD hibernation:

1 Choose any of the following from the **Time** drop-down menus:

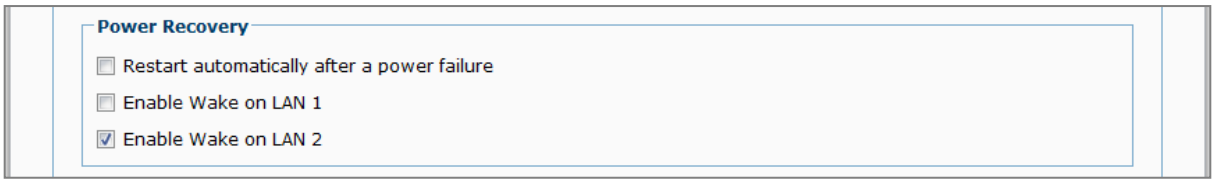
- **A time period:** Set the internal hard drive, external eSATA or USB disk to HDD hibernation mode after the specified period of inactivity.
- **None:** Disable HDD hibernation.

2 Click **OK**.

Power Recovery

You can set the following power recovery functions:

- Boot up DiskStation automatically after power has been restored if the DiskStation was shut down abnormally due to a power failure.
- Enable Wake on LAN to allow remote startup.[1]



To enable the power recovery function:

1 Tick **Restart automatically after a power failure**.

2 Click **OK**.

To enable Wake on LAN:

1 Tick **Enable Wake on LAN** (or **Enable Wake on LAN 1** or **Enable Wake on LAN 2** for dual LAN models).

2 Click **OK**.

[1] Wake on LAN is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

More Information

About Wake on LAN:
After Wake on LAN is enabled for your DiskStation, you can turn on Synology DiskStation over the local area network or the Internet by using a WOL (Wake on LAN) application. Activate the function by entering the following DiskStation information:

IP address (or DDNS hostname) and the MAC address of your DiskStation.

Wake on LAN works only after Synology DiskStation is shut down properly by pressing the **Power** button or selecting **Shutdown** from DSM's Main Menu, and its power cord is plugged into a working power outlet.

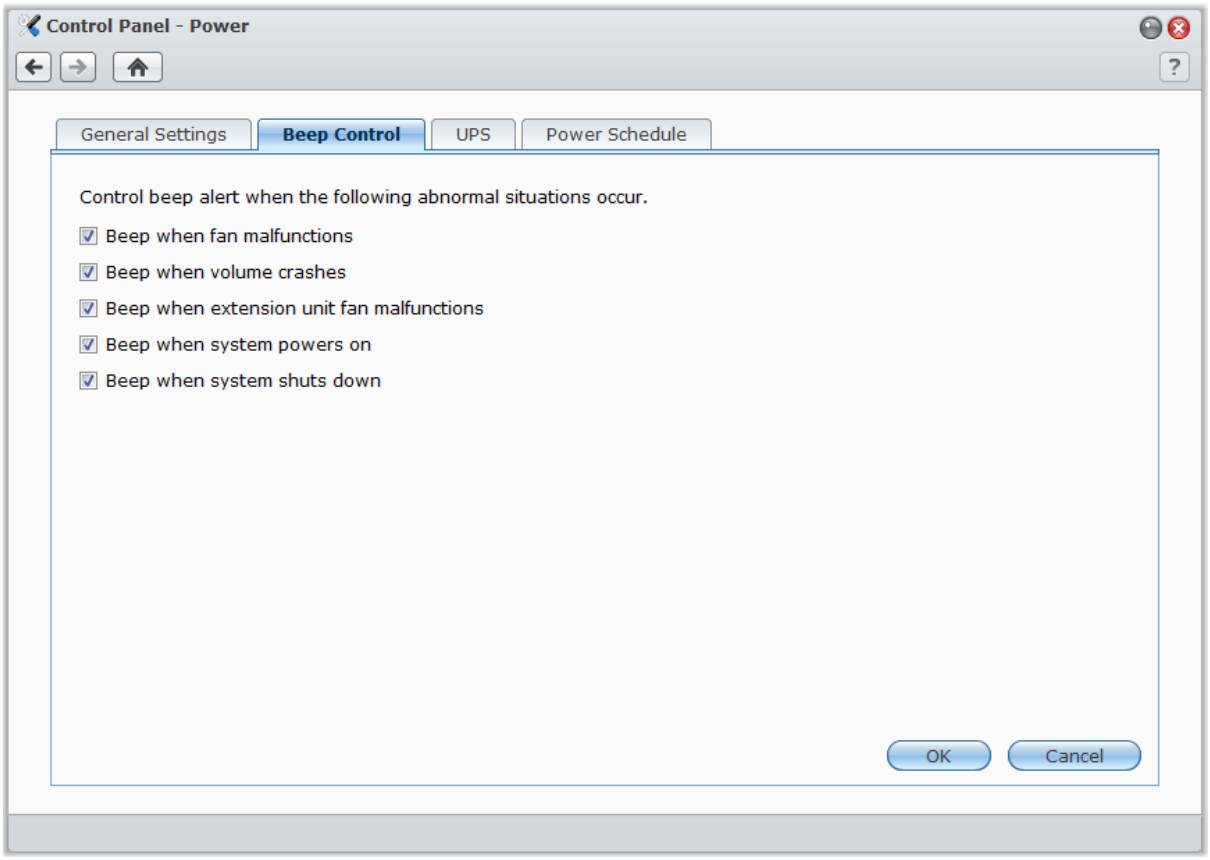
Note: You can also perform Wake on LAN for supported Synology DiskStation with Synology Assistant. See the help of Synology Assistant for more information.

Fan speed mode

You can choose the appropriate fan speed mode (3.5" or 2.5") for different hard drive sizes accordingly.[1]

Manage Beep Control

Click the **Beep Control** tab to control beep alert when abnormal situations occur.



[1] Fan Control is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

To manage beep control:

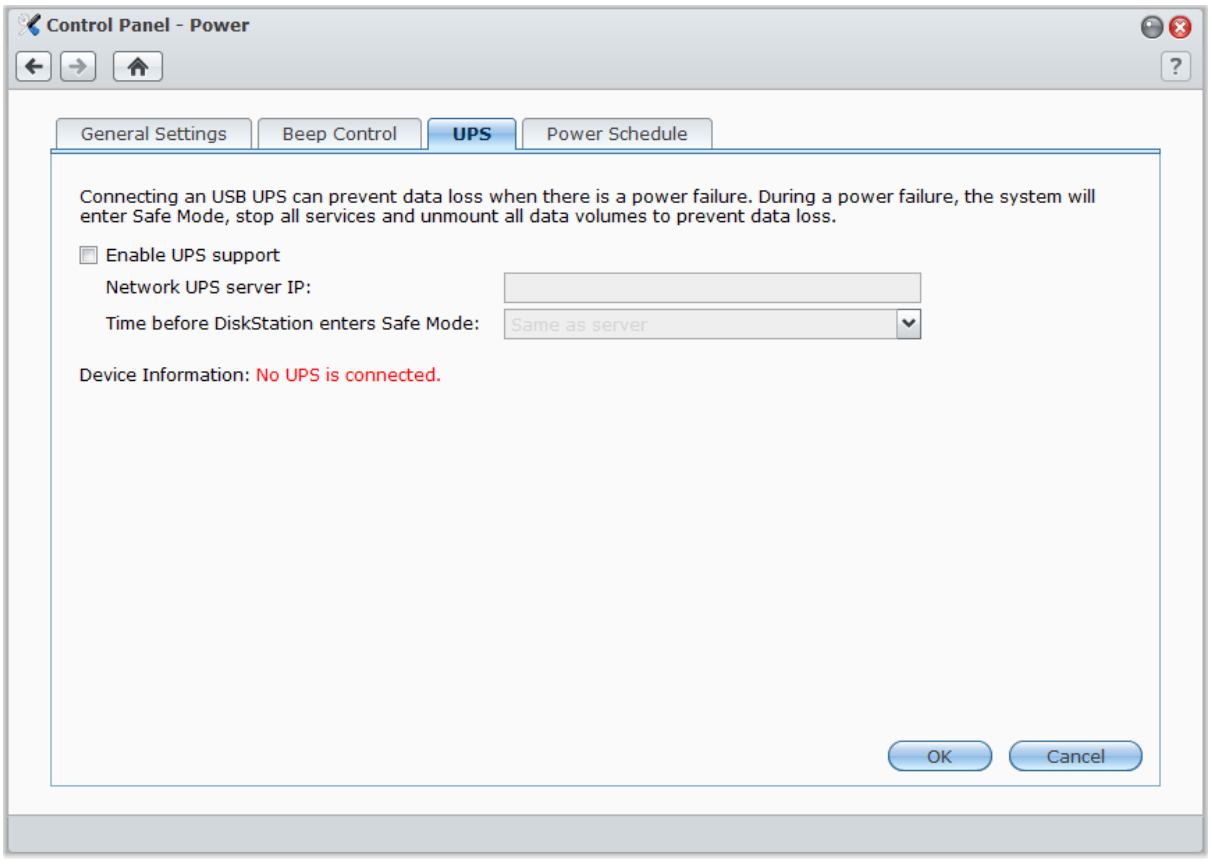
1 Tick or uncheck any of the following checkboxes:

- **Beep when fan malfunctions**
- **Beep when volume crashes**
- **Beep when extension unit fan malfunctions**
- **Beep when system powers on**
- **Beep when system shuts down**

2 Click **OK**.

Manage UPS

Under the **UPS** tab, you can enable UPS support to prevent data loss when an unexpected power failure occurs.



To enable local UPS support:

1 Connect a local UPS to the USB port of your DiskStation.

2 Tick the **Enable UPS support** checkbox.

3 Set the **Time before DiskStation enters Safe Mode**.

> ***Note:*** If the local UPS is low on battery, or the network UPS server enters Safe Mode, DiskStation will ignore the specified time period and enter Safe Mode immediately.

4 You can decide whether to send a shutdown signal to the UPS when the system enters Safe Mode. Most UPS can restore power supply automatically when the power recovers.

5 Click **OK**.

Term Explanation

When entering **Safe Mode**, the system will first stop all services and unmount all data volumes to prevent data loss, so that when the UPS shuts down, the system will be turned off safely. If the Power Recovery function has been enabled, the system will restart automatically when power is restored.

To enable network UPS support:

1 Tick the **Enable UPS support** checkbox.

2 Enter the **Network UPS server IP**. (Make sure the server allow connection from Synology DiskStation)

3 Set the **Time before DiskStation enters Safe Mode**.

4 Click **OK**.

More Information

Network UPS support requirements:

- You will need another server connected to an UPS that can be communicated via internet, i.e. a network UPS server.
- A network device, such as a switch or a hub, should be connected to the same UPS, so that Synology DiskStation can still communicate with network UPS server during an unexpected power failure.

To enable Network UPS server:

1 Connect a USB UPS to Synology DiskStation.

2 Tick the **Enable UPS support** checkbox.

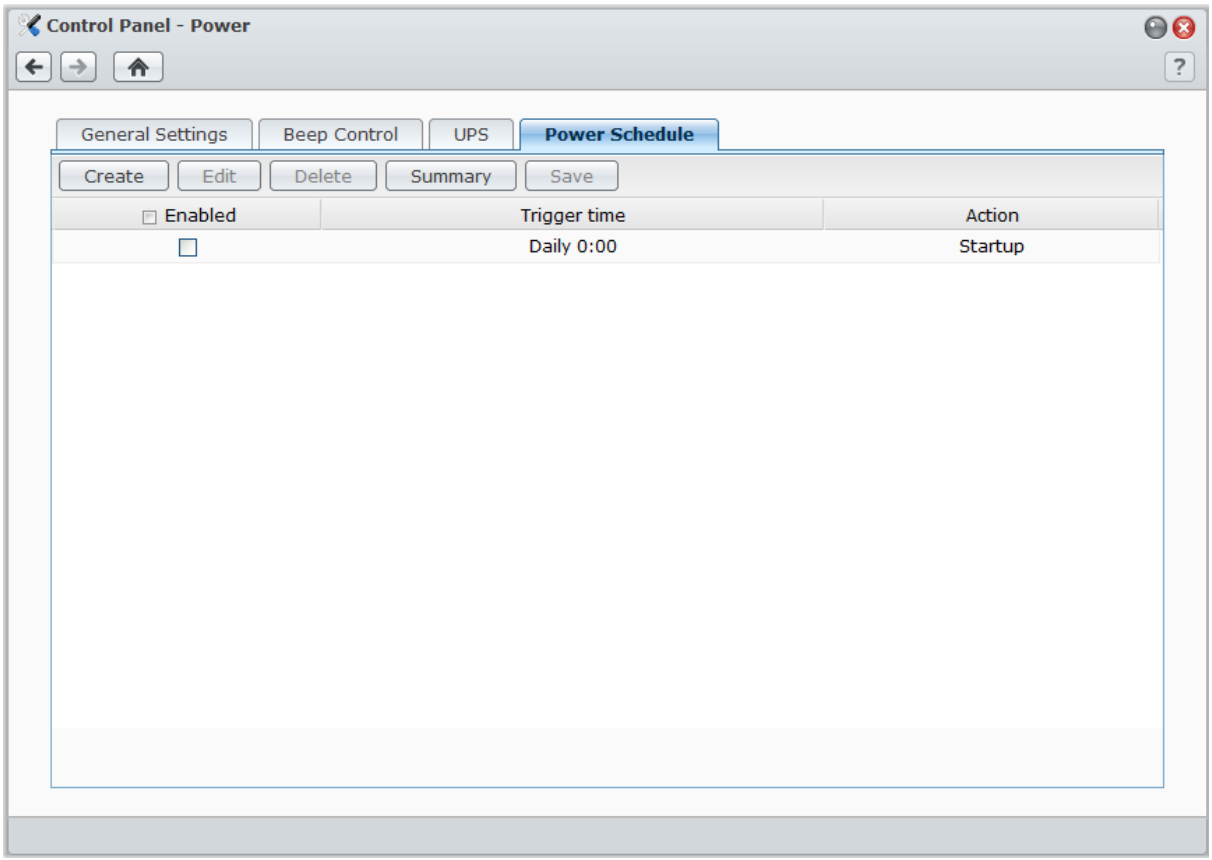
3 Tick the **Enable Network UPS Server** checkbox.

4 Enter the IP addresses which will be allowed to connect to Synology DiskStation.

5 Click **OK**.

Power Schedule

Click the **Power Schedule** tab to start up or shut down automatically at a specified time.



To add a new startup/shutdown schedule:

1 Click the **Create** button to open the **Add Schedule** dialog.

2 Choose **Startup** or **Shutdown**.

3 Set the **Date** and **Time** for startup or shutdown.

4 Click **OK**.

5 Click **Save**.

The new schedule will be added to the schedule list.

To edit a schedule:

1 Select the schedule and click **Edit** to edit the schedule.

2 Click **OK**.

3 Click **Save**.

To enable or disable a schedule:

1 Tick or uncheck the checkbox for the schedule.

2 Click **Save**.

To enable or disable all schedules:

1 Tick or uncheck the Enabled checkbox.

2 Click **Save**.

To delete a schedule:

1 Select a schedule and click **Delete**.

2 Click **Save**.

To view schedule summary:

Click **Summary** to browse the weekly schedule for startup/shutdown.

> ***Note:*** You can specify up to 100 schedules for one DiskStation.

Chapter 4

Manage Storage Space

Before sharing Synology DiskStation services with your users, you need to set up storage spaces first.

This chapter explains how to use Storage Manager to set up storage space (including volumes, iSCSI Targets, iSCSI LUNs), access external disks connected to DiskStation, and check hard drive's status.

What is Volume?

A volume is the combination of several hard drives into one storage space for centralized management.

If you buy a Synology DiskStation with 2 or more bays, you can choose between several volume types. Some types of volume can provide data protection to prevent data loss caused by disk failure.

Synology DiskStation Supported Volume Types

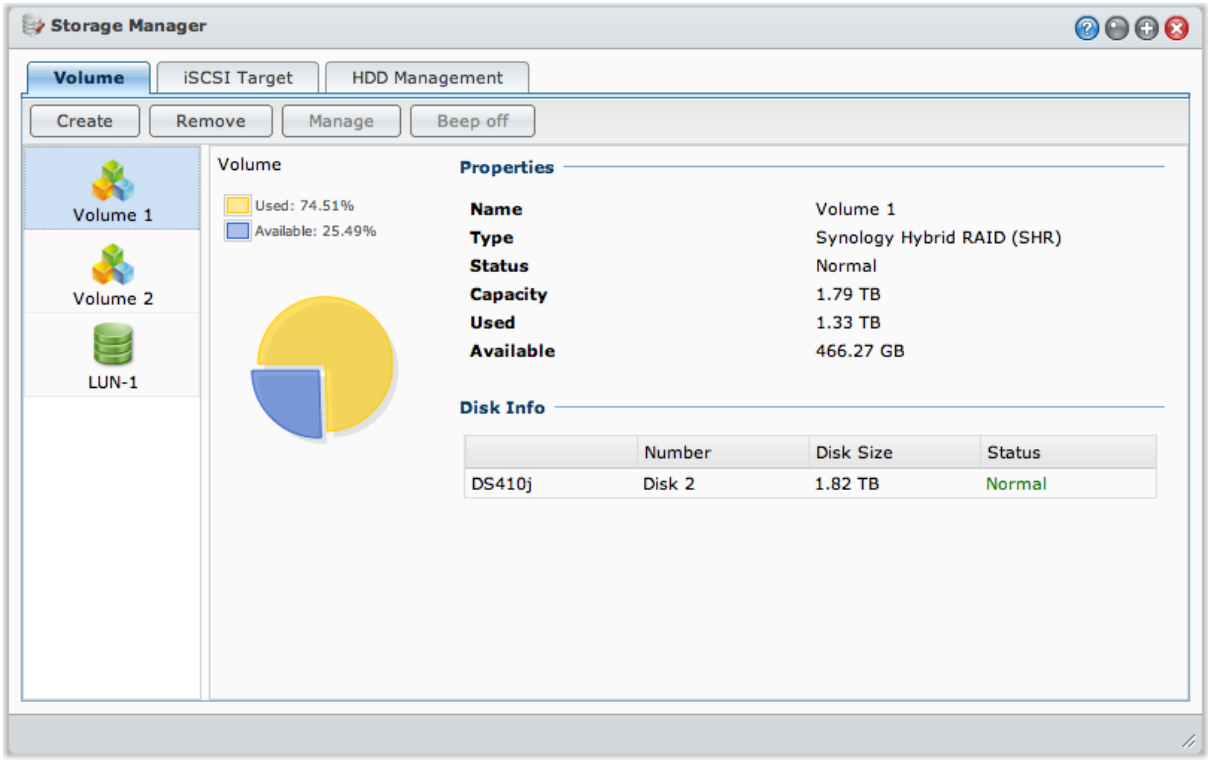
Volume Type	Data Protection	HDD #	Description	Volume Capacity
Standard	Yes	≧1	The **Standard** volume (also known as **Synology Hybrid RAID** or **SHR**) can optimize the volume size when combining hard drives with different sizes. If the volume is composed of two or more hard drives, data integrity is protected when one of the hard drives fails.	Optimized by the system
Basic	No	1	A **Basic** volume must be created with one hard drive as an independent unit. When creating a Basic volume, you can select only one hard drive at a time.	1 x (HDD size)
JBOD[1]	No	≧2	**JBOD** is a collection of hard drives.	Sum of all HDD sizes
RAID 0[1]	No	≧2	Combining multiple disks to build a volume, **RAID 0** offers **Striping**, a process of dividing data into blocks and spreading the data blocks across several hard drives, but without safety measures.	N[2] x (Smallest HDD size)
RAID 1[1]	Yes	2 - 4	The system will write identical data to each hard drive at the same time, so data integrity is protected when at least one disk is normal.	Smallest HDD size
RAID 5[1]	Yes	≧3	This configuration includes a backup option. It uses **parity mode** to store redundant data on space equal to the size of one disk for later data recovery.	(N – 1) x (Smallest HDD size)
RAID 5+Spare[1]	Yes	≧4	A **RAID 5+Spare** volume requires at least four drives, and one will act as a **hot spare drive** to rebuild the failed drive of the volume automatically.	(N – 2) x (Smallest HDD size)
RAID 6[1]	Yes	≧4	This volume type eliminates the risk of volume failure and provides extra data protection. It uses parity mode to store redundant data on space equal to the size of two disks for later data recovery.	(N – 2) x (Smallest HDD size)
RAID 10[1]	Yes	≧4 (even number)	**RAID 10** has the performance of **RAID 0** and data protection level of **RAID 1**. **RAID 10** combines two hard drives into a group, in which data integrity is protected when one of the two hard drives fails.	(N / 2) x (Smallest HDD size)

[1] Volume types except for Basic are supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

[2] "N" represents the total number of hard drives within the volume.

Manage Volumes with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **Volume** tab to create, set up, and manage DiskStation volumes.



Create a Volume

Click **Create** and follow the wizard to create a volume.

Remove a Volume

1 Select the volume you want to remove.

2 Click **Remove** and follow the wizard to remove the volume.

> ***Note:*** Data stored on the volume will be deleted after you remove the volume. Be careful using this option.

Repair a Volume

The repair function is available for **RAID 1**, **RAID 10**, **RAID 5**, **RAID 5+Spare**, **RAID 6**, and **Standard** (SHR) volumes. When one of the hard drives in the volume fails, the volume will be in the **degraded** mode. You can repair the volume by replacing the crashed disk to keep the data on the volume protected.

> ***Note:*** Synology DiskStation provides **hot swapping** function, allowing you to replace the crashed disk without shutting down your Synology DiskStation.[1]

To identify and replace the crashed disk:

1 Identify the crashed disk by doing one of the following:

- Check the hard drive icons in **Storage Manager**. The icon of the crashed disk will appear with an exclamation mark.
- Go to **Information** > **Status**, and check the **status** column in the **Hard disk(s)** section. (See "Check System Information" on Page 161 for more information.)

[1] This is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

- Check the LED indicators on the front panel. (See "Appendix B: LED Indication Tables" on Page 179 for more information.)

2 Pull out the hard drive tray to replace the crashed disk with a new one.

> ***Note:*** The replacement hard drive size must be larger or equal to the size of the smallest disk in the volume.

To repair a volume:

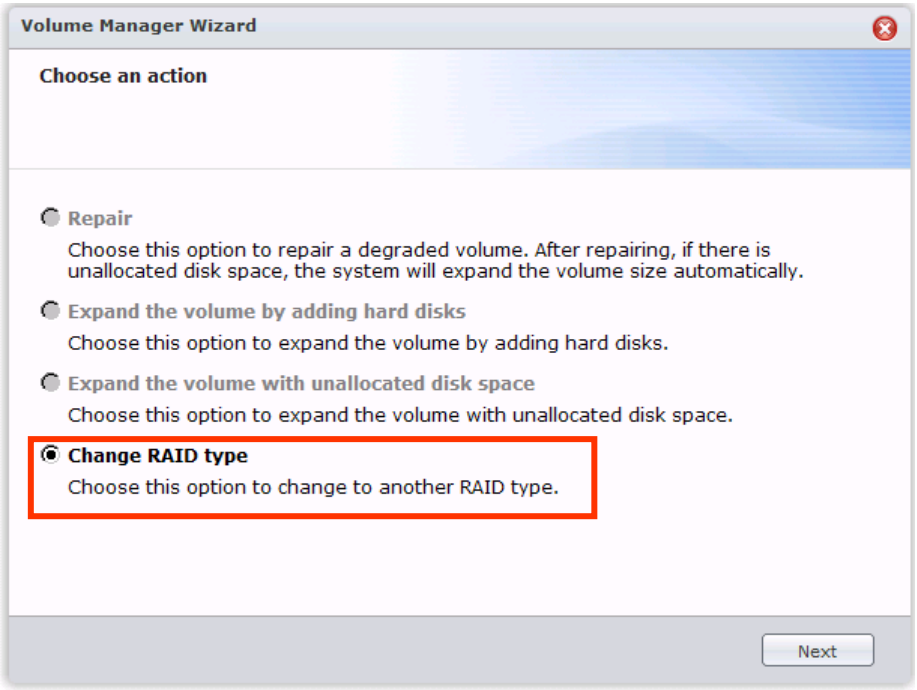
1 Click **Manage**.

2 Select **Repair** and follow the wizard to repair the volume.

> ***Note:*** The status of the repairing hard drive must be **Initialized** or **Not Initialized**.

Change Volume Type

If you have created a **Basic**, **RAID 1** or **RAID 5** volume, you could add a new drive to the Synology DiskStation, and then use Storage Manager to change the volume type.



Available types of volume change include:

- Basic to RAID 1, RAID 5 or RAID 5+Spare
- RAID 1 to RAID 5 or RAID 5+Spare
- Add mirror disk to RAID 1
- RAID 5 to RAID 5+Spare or RAID 6
- RAID 5+Spare to RAID 6

To change the volume type:

1 Select the volume you want to change.

2 Click **Manage**.

3 Choose **Change RAID type** and follow the wizard to complete the setup.

> ***Note:***
>
> - The volume status must be normal.
> - The status of the added drive must be **Initialized** or **Not Initialized**.
> - If you want to change the volume type, enough number of hard drives for the new type is required. See "Synology DiskStation Supported Volume Types" on Page 37 for the required amount of disks for the volume.
> - The size of the replacement hard drive must be larger than the smallest disk size of the volume.

Expand a Volume

You can expand the storage capacity by connecting external hard drives, replacing the internal hard drive with a larger one, or adding a hard drive to the volume.

Expand by Replacing with Larger Disks

When the internal HDD storage runs out of space, the system administrator can follow the steps below to replace a larger HDD without losing the original data.

For one-bay models:

1 Turn off the Synology DiskStation.

2 Replace the internal hard drive with a larger one.

3 Turn on the Synology DiskStation.

4 Reinstall the system. See "Reinstall Synology DiskStation" on Page 169 for more information.

5 Connect the replaced hard drive to the USB or eSATA port.

6 Copy the data from the replaced hard drive to the new hard drive.

7 Remove the replaced hard drive.

For Basic or RAID 0 volume on models with two or more bays:

1 Back up all data stored on the Synology DiskStation.

2 Turn off the Synology DiskStation.

3 Replace the internal hard drives with larger ones.

4 Turn on the Synology DiskStation

5 Reinstall the system. See "Reinstall Synology DiskStation" on Page 169 for more information.

6 Copy the backup data to the new volume.

For RAID 1 and RAID 5, RAID 5+Spare, RAID 6, and RAID 10 volumes:

1 Turn off the Synology DiskStation (skip this step for models that support disk hot swapping).

2 Replace the first internal hard drive with a larger hard drive.

3 Turn on the Synology DiskStation and repair the volume. See "Repair a Volume" on Page 38 for more information.

4 Repeat step 1 to 3 until all internal hard drives are replaced with larger hard drives.

5 The system will expand the volume automatically.

Note:

- Before replacing the spare disk of a RAID 5+Spare volume, you need to click **Manage**, click **Change RAID type**, and then follow the wizard to change the volume.
- When the system is removing a volume, all enabled services on other volumes will be temporarily stopped. When the volume is removed successfully, those services will be resumed.
- You can only remove the hard drive when the volume is in **Normal** status; otherwise it will cause data loss. If the volume is in **Degraded** status, please repair the volume before replacing it.

Expand by Adding Disks

If you have empty hard drive trays in your Synology DiskStation, you can expand **JBOD**, **RAID 5**, **RAID 5+Spare**, **RAID 6**, or **RAID 10** volumes by adding disks.

To expand a volume by adding disks:

1 Install a new hard drive for your Synology DiskStation.

2 Select the volume you want to expand.

3 Click **Manage**.

4 Select the hard drive in the **Choose disks** section.

5 Follow the wizard to complete the setup.

Note:

- For RAID 5, RAID 5+Spare, and RAID 6 volume, the hard drive size must be larger than the smallest disk in the volume.
- The volume status must be normal.
- The status of the added disk must be **Initialized** or **Not Initialized**.
- You can also expand your volume with Synology Expansion Device (DX510, RX410, DX5, and RX4) using the same way.[1]

Manage iSCSI with Storage Manager

Go to **Main Menu** > **Storage Manager** and click the **iSCSI Target** tab to manage iSCSI service on your Synology DiskStation.

With DSM 3.0, you can manage up to 10 iSCSI Targets on one Synology DiskStation, and map iSCSI LUNs to them.

Term Explanation

iSCSI

iSCSI is an Internet Protocol based storage networking standard for linking data storage facilities. By carrying SCSI commands over IP networks, iSCSI can facilitate data transfers over local area networks (LANs), wide area networks (WANs), or the Internet.

Through iSCSI, the space on storage server will be regarded as local disks by client's operation system. But in reality, all data transferred to the disk are actually transferred over network to the storage server.

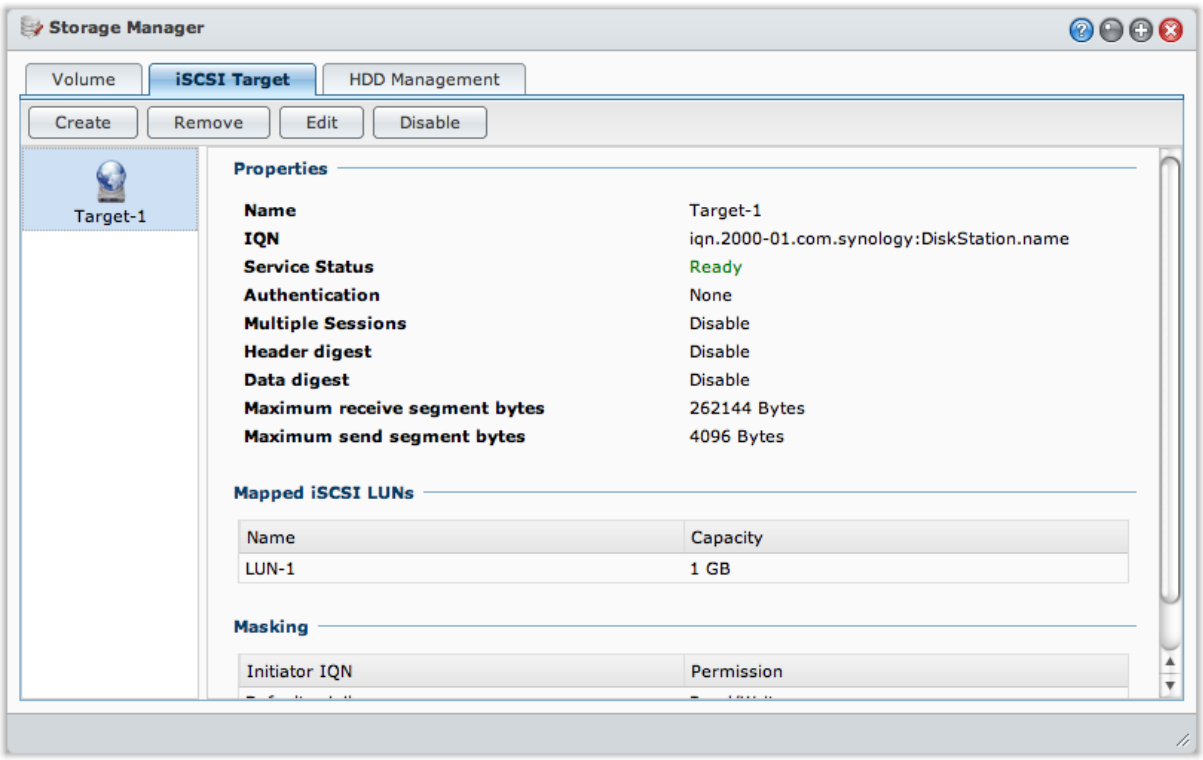
iSCSI Target and LUN

In SCSI terminology, A LUN (logical unit number) represents an individually addressable (logical) SCSI device that is part of a physical SCSI device (called "Target").

An iSCSI environment emulates the connection to a SCSI hard disk. An iSCSI Target is like a connection interface, and LUNs are essentially numbered disk drives. When an iSCSI Target is connected by an iSCSI initiator (a client), all the LUNs mapped to the iSCSI Target are virtually attached to the client's operation system. Therefore, Initiators can establish and manage file systems on iSCSI LUNs, as they would a raw SCSI or IDE hard drive.

[1] Synology Expansion Device are supported on specific models only. Please visit **www.synology.com**.

Manage iSCSI Target



To create an iSCSI Target:

1 Click the **Create** button.

2 Enter the iSCSI Target's information, including **Name**, **IQN**, and whether to enable CHAP authentication.

3 Click **Next**.

4 Set up iSCSI LUN mapping. Select **Create a new iSCSI LUN** or **Map existing iSCSI LUNs**.

5 Click **Next**.

6 Click **Back** to modify or **Apply** to confirm settings.

Term Explanation

IQN: IQN (iSCSI Qualified Name) is a set of unique name for an iSCSI Target. It should not conflict with iSCSI Target IQNs on other servers. IQN must be less than 128 characters and can include letters(case insensitive), numbers, colons, dashes, and dots. The suggested naming format is iqn.[date].[domain]:[device identifier], for example: **iqn.2000-04.com.synology:storage.diskarray.1**.

CHAP authentication: If you select **CHAP**, the server will be able to verify the client's identity. In **Mutual CHAP**, both the client and the server will authenticate each other. Username can be composed of 1 ~ 12 letters and numbers, and password can be composed of 12 ~ 16 letters and numbers.

To remove an iSCSI Target:

You can remove an iSCSI Target and any mapped iSCSI LUNs. Note that when removing an iSCSI LUN, all data on the iSCSI LUN will be deleted.

1 Select the iSCSI Target you want to remove.

2 Click **Remove**.

3 If you want to remove mapped iSCSI LUNs, select **Delete mapped iSCSI LUNs as well** and select the ones you want to remove.

4 Click **OK**.

To edit an iSCSI Target:

1 Select the iSCSI Target you'd like to edit.

2 Click **Edit**.

3 Edit the settings to your preference. Click **OK** to save the changes.

Term Explanation
CRC Checksum: Enable CRC Checksum to check if any error occurred during data transmission.
Multiple Sessions: Allow multiple sessions from one or more initiators to connect to the same iSCSI Target at the same time. To protect your files from corruption or unexpected data loss, it is strongly suggested that you use a shared file system or cluster system such as VMware Virtual Machine File System (VMFS) and Oracle Cluster File System (OCFS).
Masking: Masking allows an iSCSI Target to be exclusively accessed by specified iSCSI initiator IQNs.

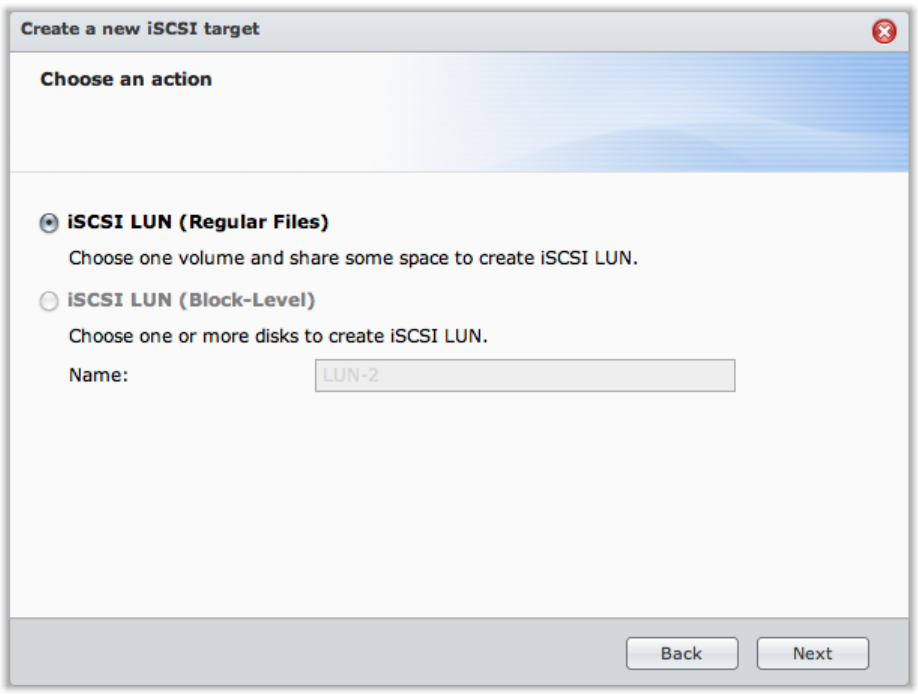
To enable or disable an iSCSI Target:

1 Select the iSCSI Target you'd like to enable or disable.

2 Click **Enable** or **Disable**.

Manage iSCSI LUN

An iSCSI LUN (logical unit number) can be mapped to multiple iSCSI Targets to perform storage operations such as read or write.



There are 2 ways to create an iSCSI LUN:

- Designate several disks (Block-Level).
- Designate a portion of your volume space (Regular Files).

If you create an iSCSI LUN with several disks, you can repair or expand it, or change its RAID type, just like using a volume. (Please see Page 38 of this chapter for detailed information about volume management.)

Maximum number of iSCSI LUNs on a DiskStation:

- **256** for Intel-based models, such as DS1010+, RS810+, RS810RP+, etc.
- **10** for other models.

To create an iSCSI LUN:

1 Click **Create**.

2 Select **Custom**.

3 Click **Next**.

4 Select the iSCSI LUN type you want to create.
   - **iSCSI LUN (block-level)**: The iSCSI LUN is created on one or more disks. You can repair or expand it, or change its RAID type, just like using a volume.
   - **iSCSI LUN (regular files)**: The iSCSI LUN is created by designating a portion of the volume space for its usage. Follow the steps below to continue.
5 Click **Next**.
6 Set up iSCSI LUN configuration, including **Name**, **Location**, **Thin Provisioning**, **Capacity (GB)**, **iSCSI Target Mapping**.
7 Click **Next**.
8 Confirm the settings. Click **Back** to modify settings or confirm by clicking **Apply**.

Term explanations

Thin Provisioning: Thin Provisioning is a method for optimizing storage utilization by allocating storage space in a dynamic and on-demand manner. This setting is only available for **iSCSI LUN (regular files)**.

iSCSI Target Mapping: Map the iSCSI LUN to one or more iSCSI Targets.

To remove an iSCSI LUN:

By removing an iSCSI LUN, all data on the iSCSI LUN will be deleted. The connection between the iSCSI LUN and any mapped iSCSI Target will also be lost.

1 Select the iSCSI LUN you'd like to remove.
2 Click **Remove**.
3 Click **Cancel** to abort or **OK** to confirm.

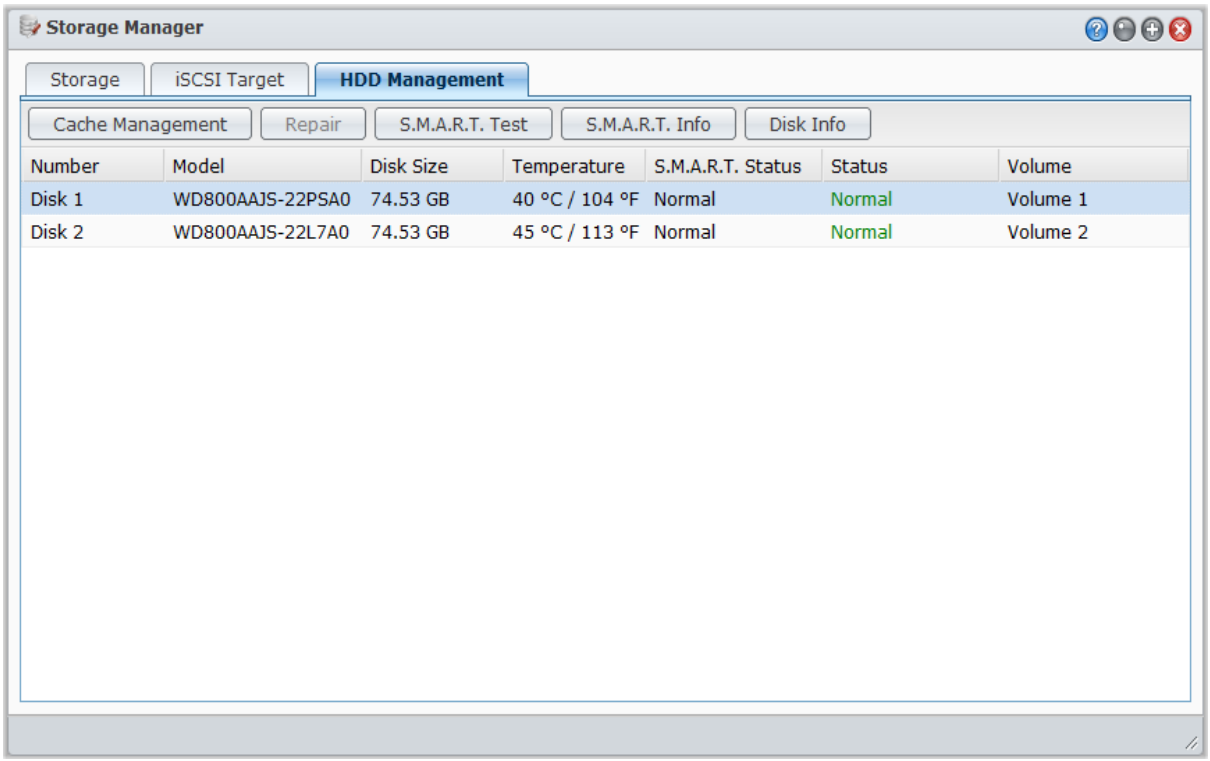
To edit an iSCSI LUN:

1 Select the iSCSI LUN you'd like to edit.
2 Click **Edit**.
3 Edit the **Properties** and **Mapping** to your preference.
4 Click **OK** to save the settings.

Note: To avoid data loss when editing iSCSI LUN capacity, you can only make it larger than the current size.

Manage Hard Disks with Storage Manager

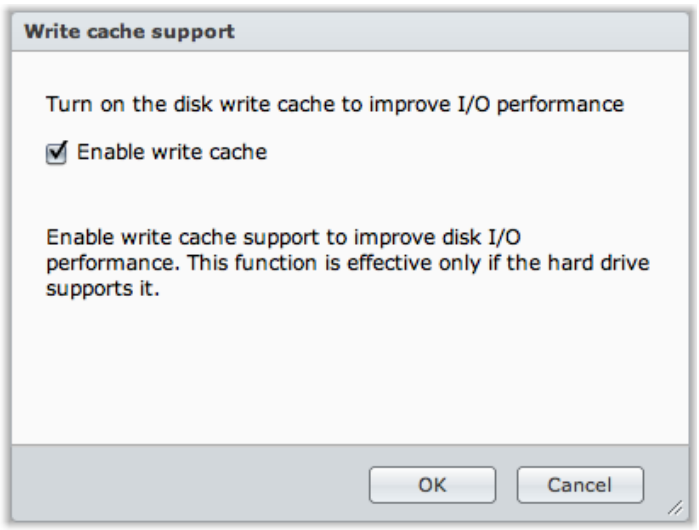
Go to **Main Menu** > **Storage Manager** and click the **HDD Management** tab to manage your hard disks.



Enable Write Cache Support for Hard Disks

Write cache support is only effective on hard disks that support it. Enabling cache offers you enhanced performance on your Synology product. However, to ensure data protection, the usage of a UPS device is strongly recommended. It is also highly suggested that the system is shut down properly every time after use.

In other words, while disabling cache offers the benefit of increasing resilience against abnormal power, there is also the possibility of reduction in performance.



To enable write cache support for your disk:

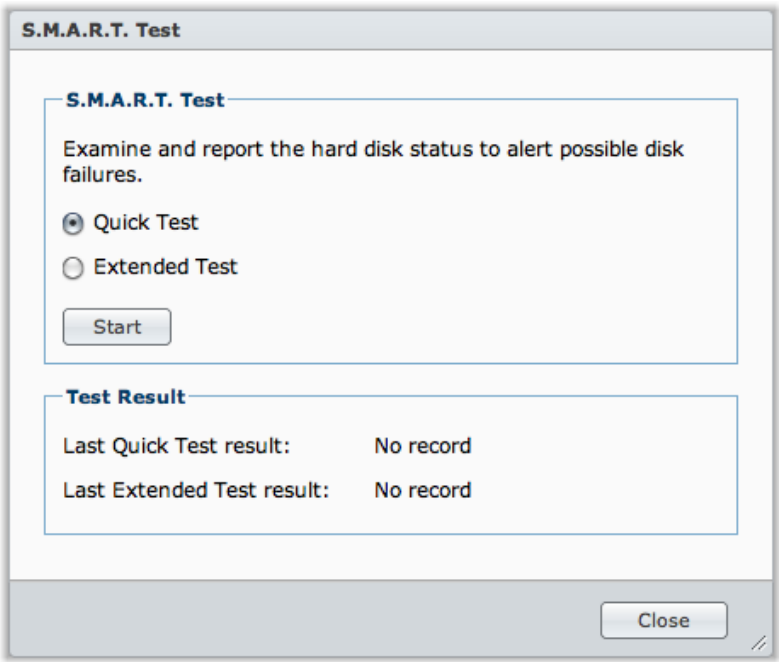
1 Select a disk on the disk list and click **Cache Management**.

2 Tick **Enable write cache**. By default, this function is enabled.

3 Click **OK**.

Run S.M.A.R.T. Analysis

Disk S.M.A.R.T. will help you to examine and report the hard disk status to alert possible disk failures. It is recommended that you change your disk if errors are detected.



To start S.M.A.R.T. test:

1 Select a disk on the disk list and click **S.M.A.R.T. Test**.

2 Choose any of the following test methods and click **Start**:

- **Quick Test**
- **Extended Test**

> ***Note:*** The exact processing time might vary under different system environment.

3 The latest test results are shown in the **Test Result** section.

4 Click **Close** to finish.

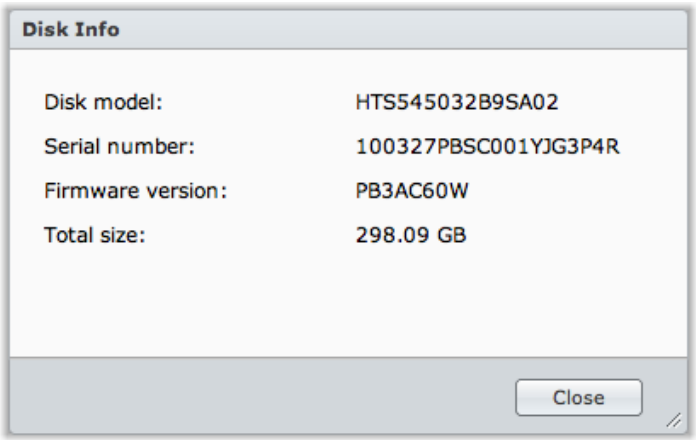
To check S.M.A.R.T. info:

1 Select a disk on the disk list and click **S.M.A.R.T. Info**. The numbers listed can help you to diagnose the status of your disk.

2 Click **Close** to finish.

Check Disk Info

Here you can see the disk's model name, serial number, firmware version, and total size.



To check disk info:

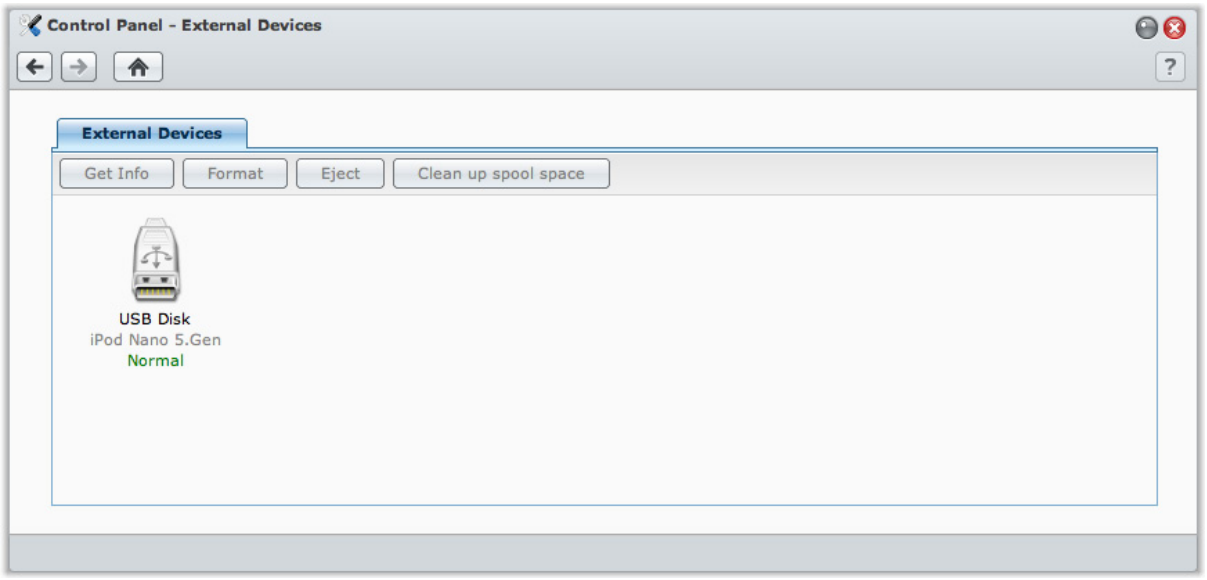
1 Select a disk on the disk list and click **Disk Info**.

2 Click **Close** to finish.

Manage External Disks

You can attach external USB or eSATA disks to the USB or eSATA port of your Synology DiskStation for backup or file sharing purposes.[1]

Go to **Main Menu** > **Control Panel** > **External Devices** to manage the attached external disks.



To attach an external disk:

1 Connect an external USB or eSATA disk to the USB or eSATA port of your Synology DiskStation.

2 A new shared folder named **usbshare1** (for USB device) or **esatashare** (for eSATA device) will be created automatically and ready for access.

Note:

- When more than 1 external USB disk is connected, **usbshare2**, **usbshare3** … will be created.
- DiskStation recognizes the following format: **EXT3**, **EXT4**, **FAT**, **FAT32**, and **NTFS**. Any unrecognized USB disk will have to be formatted first before being used on the system.

To get the information of the disk:

You can access disk information by clicking **Get Info**.

To eject or format an external disk:

Click **Eject** or **Format**.

Note:

- For more information about external disks, see its help by clicking the **Help** button (with a question mark) at the top-right corner.
- You can also manage USB printer here. See "Set Synology DiskStation as the Print Server" on Page 106 for more information.

[1] eSATA is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

Chapter 5

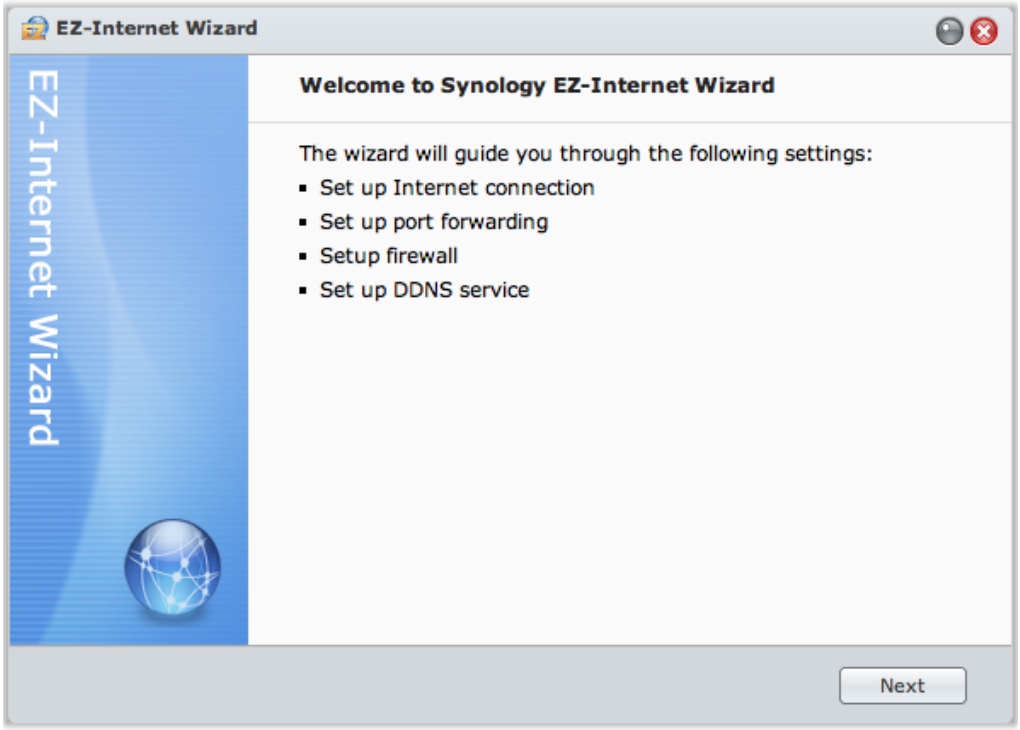
Connect from the Internet

You can connect to your Synology DiskStation over the Internet, allowing its services to be accessible from anywhere and anytime.

This chapter explains how to set up Internet connection with the easy-to-use Synology EZ-Internet wizard, or with the more advanced port forwarding function, and register a friendly DDNS hostname for your Synology DiskStation.

Use the EZ-Internet Wizard

The **EZ-Internet** Wizard can set up DiskStation access via the Internet with an easy-to-use wizard, without going through the complicated firewall settings, PPPoE setup, DDNS registration, and router port forwarding configuration.



To use the EZ-Internet wizard:

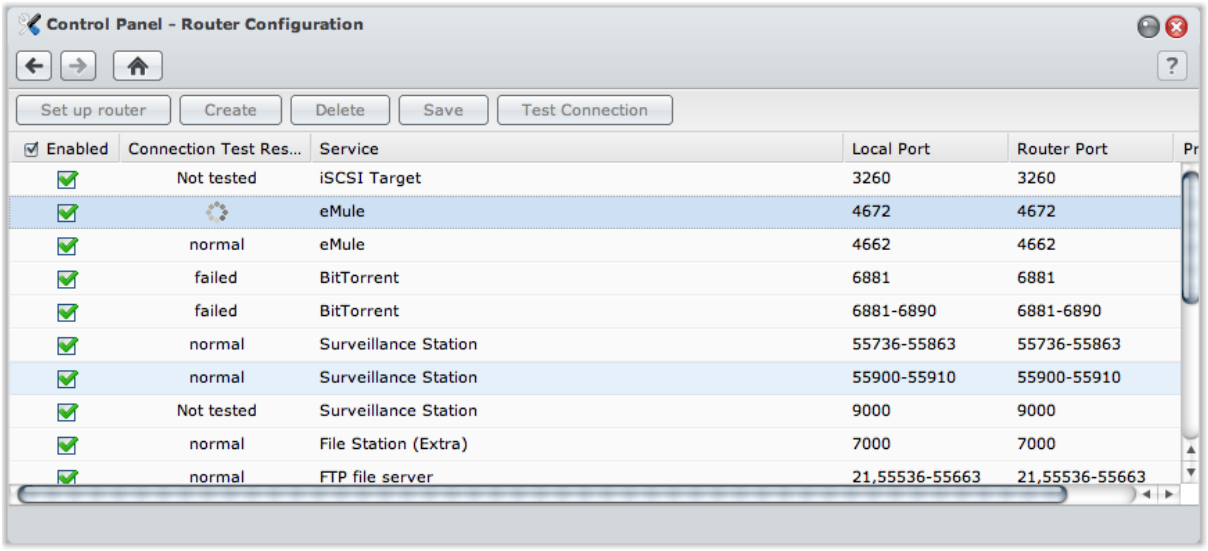
Go to **Main Menu** > **EZ-Internet** and follow the wizard to complete the setup.

Set Up Port Forwarding Rules for Router

If your Synology DiskStation is within the Intranet, you can set up port forwarding rules for the router to allow your Synology DiskStation to be accessible over the Internet.

> ***Note:*** Before you start, make sure you have manually assigned a static IP address for your Synology DiskStation. See "LAN" on Page 23 for more information.

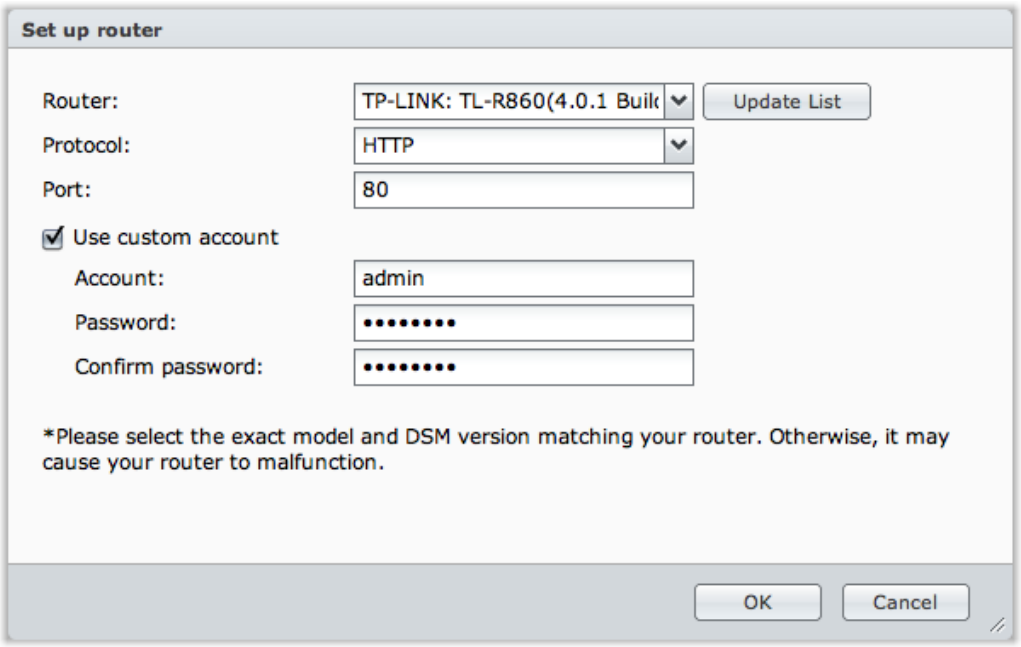
Go to **Main Menu** > **Control Panel** > **Router Configuration** to set up your router and port forwarding rules.



Note: To configure port forwarding rules and assign static IP address, you must have the administrative permission to the router.

Set up Router

Before adding port forwarding rules, you need to set up your router first.



To set up your router:

1 Click **Set up router** to open the settings window.

2 Select your router by doing the following :

- **a** Choose your router from the **Router** drop-down menu.
- **b** If you cannot find your router, click **Update List** to get the latest router support list from Synology.
- **c** If you still have trouble finding your router even after the list is updated, contact Synology.

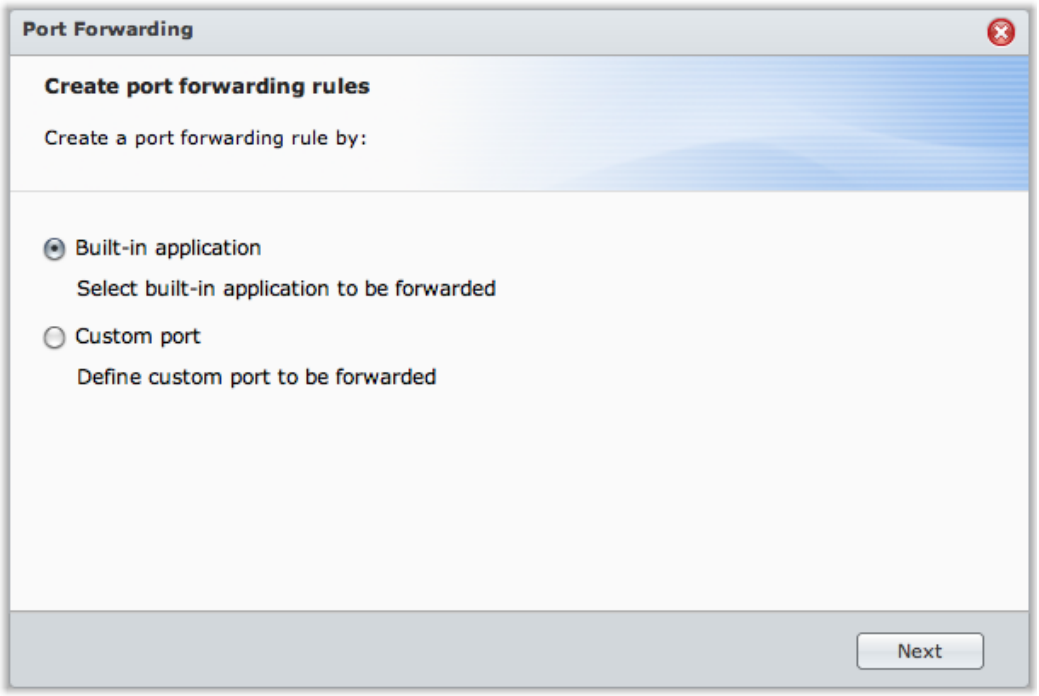
3 Enter the protocol and port for your router. The protocol and port vary depending on the model of your router. If you cannot connect using the default **HTTP** protocol and **80** port, refer to the documentation that comes with your router for correct settings.

4 If your router requires a custom account to allow it to be accessed, tick **Use custom account** and fill in the **Account** and **Password** fields.

5 Click **OK**.

Add Port Forwarding Rules

Add port forwarding rules to specify the destination ports of your Synology DiskStation that will receive packages from specific router ports.



To add port forwarding rules:

1 Click **Create**.

2 Do one of the following:

- **If you want to create port forwarding rules for system services (for example, FTP, Web Station, etc),** choose **Built-in application** and tick the system services.
- **If you want to create port forwarding rules for custom services,** choose **Custom port**. You can use the following syntax to specify port numbers and range:
  - Use **"-"** to describe port range. For example, **6881-6890**.
  - Use **","** to separate ports. For example: **21,22** or **21,55536-55663**.

> ***Note:***
>
> - Some routers don't allow using custom ports for system services forwarding. See the documentation that came with your router for more information.
> - Each router port can be used for one forwarding rule only. Using a router port for two or more rules will cause conflicts, and a warning message will appear on the screen. You need to set another port for the rule to avoid conflicts.

3 Click **Save**.

You may need to wait for a few minutes before the rules start working, depending on the models of your routers.

To test whether your rules are working or not:

1 Select the rules you want to test and click **Test Connection**.

2 The result will be displayed in the **Connection Test Result** column.

Give Synology DiskStation a DDNS Hostname

You can register a DDNS (Dynamic Domain Name Server) hostname for your Synology DiskStation, allowing it to be connected anywhere by entering the hostname in the address bar of your web browser.

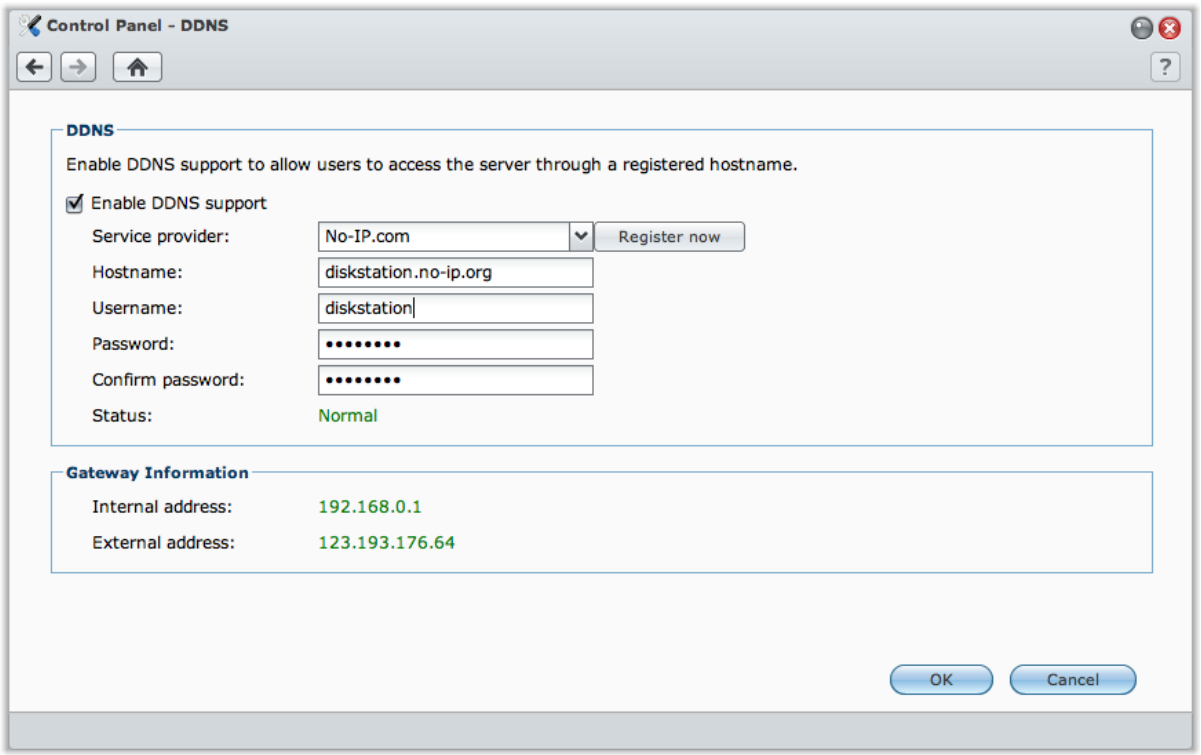
Once set up, you and your friends no longer need to remember the IP address to access your Synology DiskStation. Simply type in the DDNS hostname on the web browser as you would when connecting to any website. After the setup is complete, the hostname will always point to the external IP of the Synology DiskStation.

Service Requirement

- The DDNS server of the service provider is working normally.
- The gateway connection is normal.
- Synology DiskStation is able to connect to the DNS server.
- The following addresses are unblocked in the Firewall:
  - http://members.dyndns.org:80
  - http://checkip.dyndns.org:80
- DDNS will only run in a network environment where there is no proxy server required.

Register a DDNS hostname for Synology DiskStation

Go to **Main Menu** > **Control Panel** > **DDNS** and use one of the following methods to enter your DDNS information.



Method 1: Visit any DDNS service provider's website to register a DDNS account

1 Visit any of the following DDNS service providers to register a DDNS account:

- http://freedns.org
- http://zoneedit.com
- http://dnspod.com
- http://changeIP.com
- http://ddo.jp
- http://www.selfhost.de/
- http://www.dyndns.com/
- http://www.no-ip.com/
- http://www.3322.org/
- http://www.twodns.de/

2 Tick **Enable DDNS support** and enter the hostname, username, and password for your Synology DiskStation.

3 Click **OK**.

> ***Note:*** Remember to enter the full domain name in the **Hostname** field. (e.g. philip1234.dyndns.org)

Method 2: Register a DDNS account at No-IP.com

1 Tick **Enable DDNS support**, choose **No-IP.com** from the **Service provider** drop-down menu, and then click **Register Now**.

2 In the window that appears, enter the hostname you want in the **Hostname** field.

3 Enter your account information:

- **If you already have a No-IP.com account,** select **Use an existing No-IP.com account** and enter the account information in the **Email** and **Password** field to log in.
- **If you don't have a No-IP.com account,** select **Create a new No-IP.com account** and fill out all the required fields to register a new account.

4 Click **OK** to finish. The newly registered hostname for your Synology DiskStation will be activated in just a few seconds.

> ***Note:*** If you have any problem using your No-IP.com account, visit **No-IP.com** for troubleshooting information.

Chapter 6

Enhance Internet Security

After your Synology DiskStation is available on the Internet, you will need to safeguard it against any attacks from Internet hackers.

This chapter explains how to enhance browsing security, set up the firewall, and enable auto block.

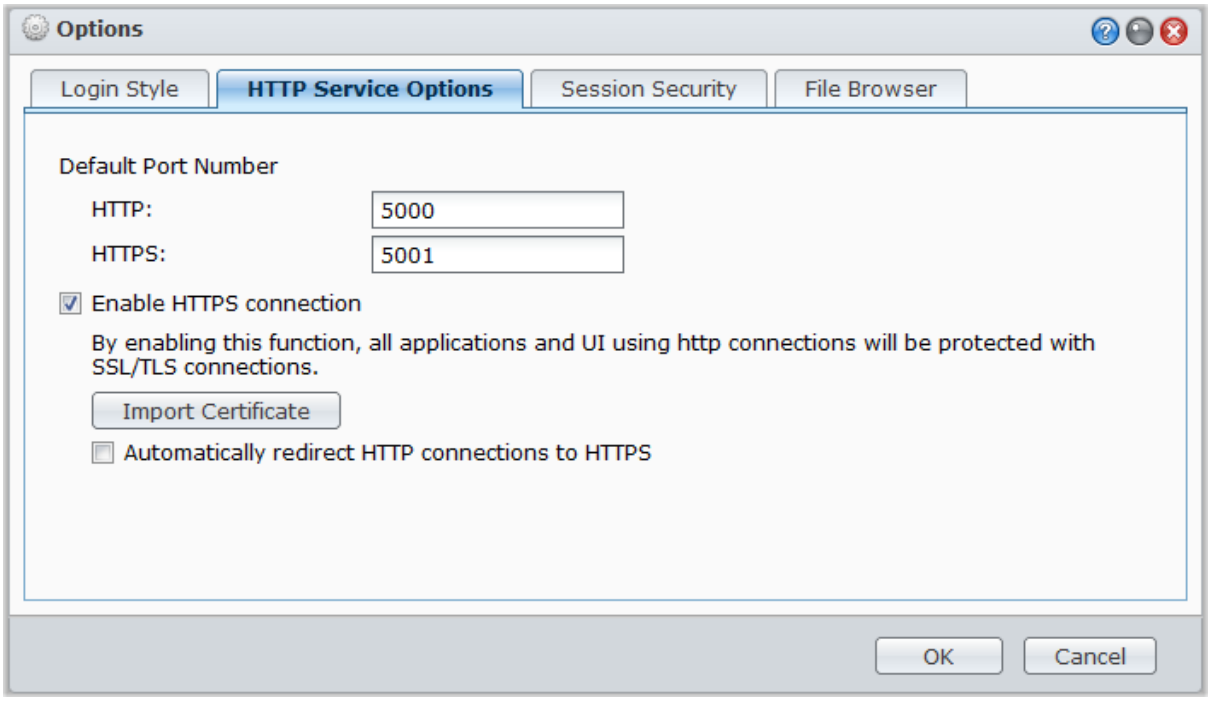
Enhance Browsing Security

Click the **Options** button at the top-right corner of **Main Menu** to enhance DSM's browsing security.

Modify HTTP Service Options

Click the **HTTP Service Options** to change the port number or enable HTTPS connection.

When the HTTPS connection is enabled, any connection to Synology DiskStation via the HTTP protocol will be encrypted with the SSL/TLS encrypting mechanism.



To change the default HTTP or HTTPS port number (for DSM and Audio Station):

1 Enter the port number in the **HTTP** or **HTTPS** field.

2 Click **OK**.

To enable HTTPS connection:

1 Tick **Enable HTTPS connection**.

2 Click the optional **Import Certificate** or check **Automatically redirect HTTP connections to HTTPS**. (See the section below for more information.)

3 Click **OK**.

More Information

About redirecting to HTTPS connection:
When the option **Automatically redirect HTTP connections to HTTPS** is checked, you will be redirected to port 5001 while trying to access the web management UI through port 5000.

Ports used for HTTPS connection:
- **DSM:** The port number is **5001**, so you can access the management UI through the secure channel: **https://Synology_Server_IP:5001/**
- **Web Station:** The port number is **443**, so you can access Web Station through the secure channel: **https://Synology_Server_IP:443/** or **https://Synology_Server_Name:443/**

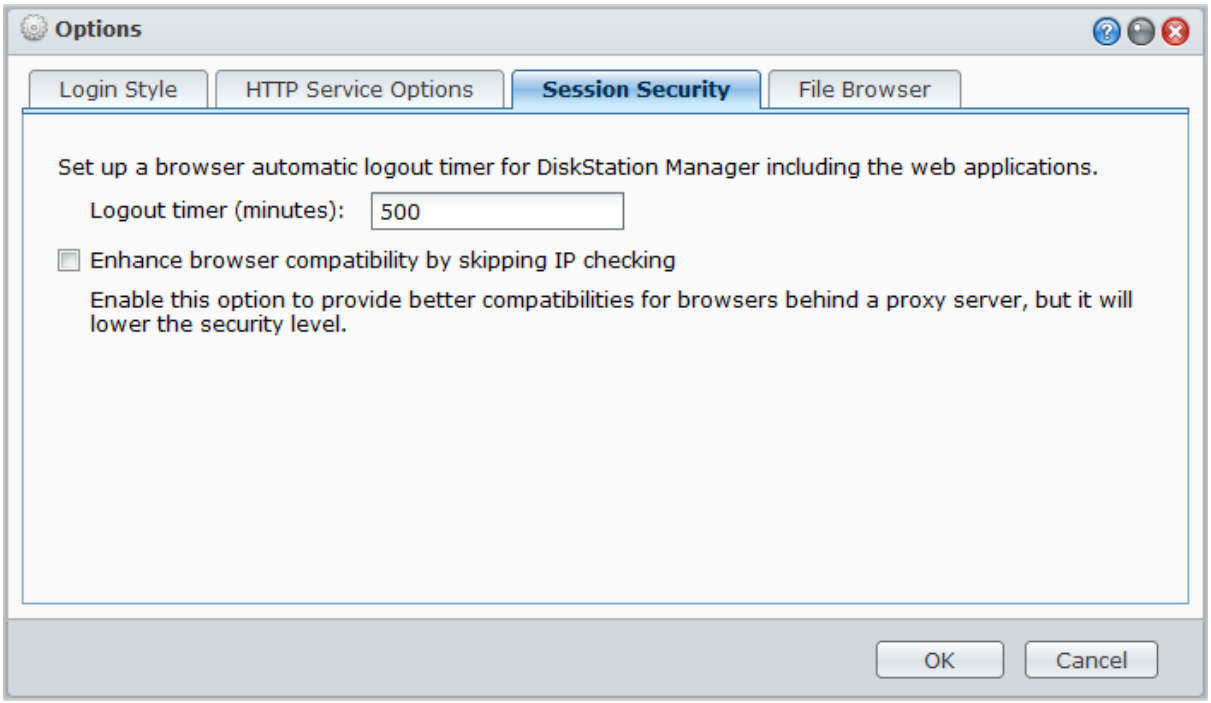
Photo Station: The port number is **443**, so you can access Photo Station through the secure channel: **https://Synology_Server_IP:443/photo/** or **https://Synology_Server_Name/photo/**

About importing certificate:
If you have a certificate issued by the trusted Certificate Authority (CA), please click **Import Certificate** to upload your own certificate and private key in order to host a valid SSL server. The certificate should match the private key. **Please keep your private key safely.**

Adjust Session Security

Click the **Session Security** tab to modify the security level for each DSM browsing session.

You can adjust session security by doing the following:
- **Set the logout timer:** An automatic logout occurs if you are inactive for the time period you specified in the logout timer.
- **Skip IP checking:** If you access DiskStation through a HTTP proxy and encounter random logouts, you can skip IP checking to avoid this problem. Nonetheless, skipping IP checking will lower the security level.



To set the logout timer:
1. Enter any value between 1 to 65535 in **Logout timer (minutes)** to specify the idle time period before the automatic logout.
2. Click **OK**.

To skip IP checking:

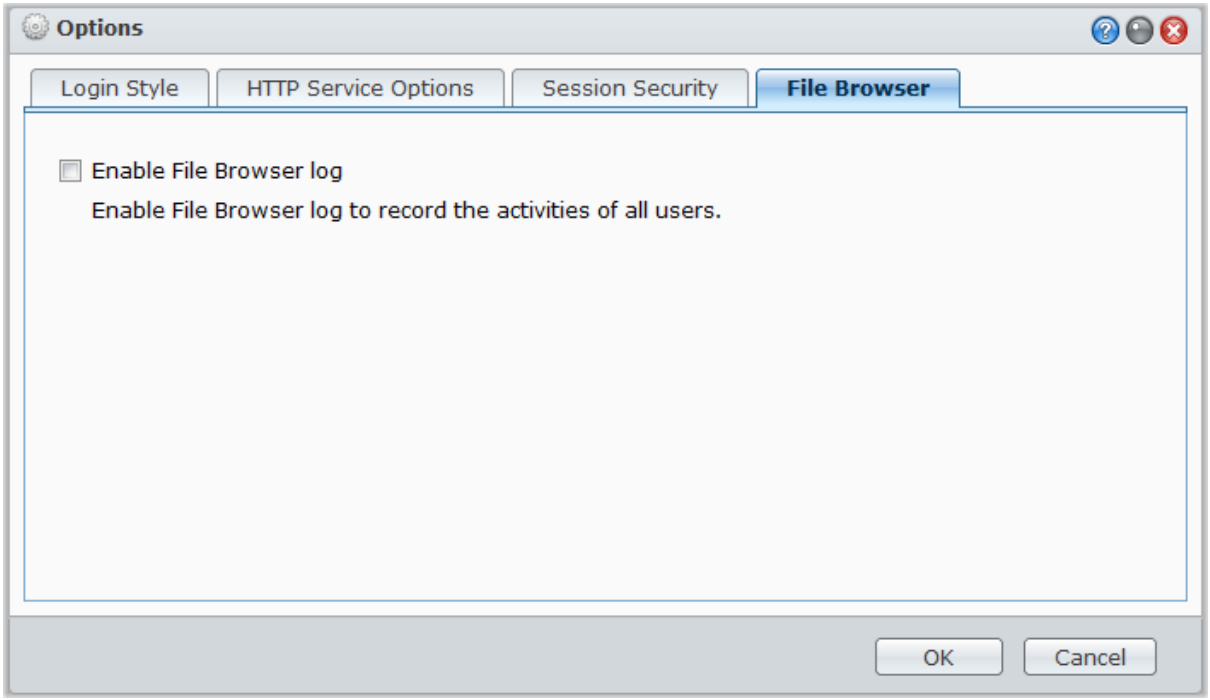
1 Tick **Enhance browser compatibility by skipping IP checking**.

2 Click **OK**.

Enable File Browser log

Click the **File Browser** tab to start monitoring the File Browser activities of all users.

> ***Note:*** For more information about File Browser, see "Access Files via File Browser" on Page 83.



To enable File Browser log:

1 Tick **Enable File Browser log**.

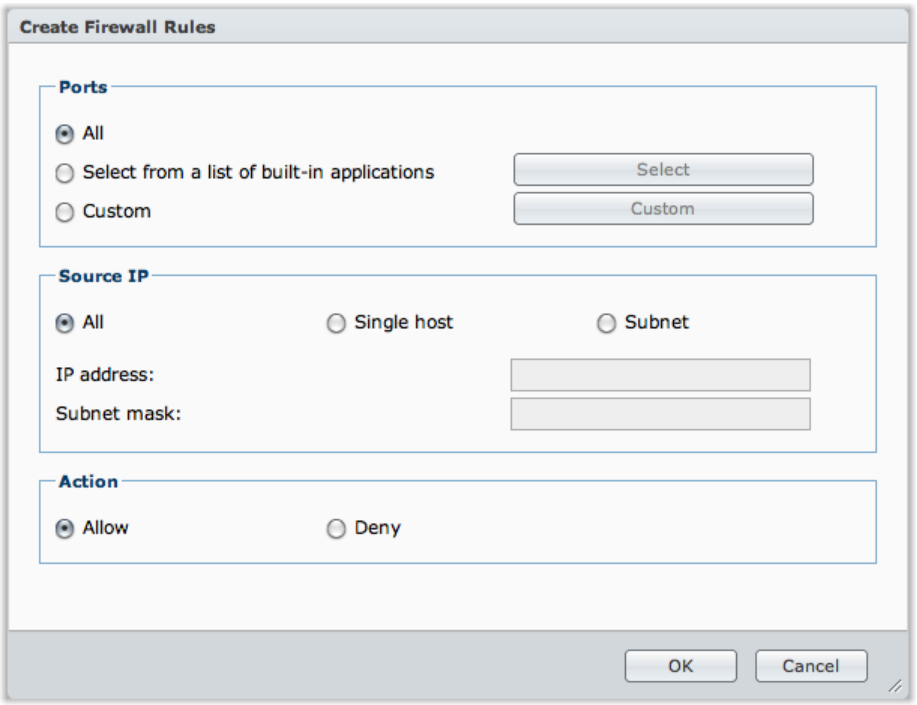
2 Click **OK**.

To see the File Browser log:

Go to **Main Menu** > **System Information** > **Log**, and choose **File Browser log** from the drop-down menu. The user activities are shown under the **Event** column, including **Upload**, **Download**, **Delete**, **Rename**, **Move**, **Copy** and **Property set**.

Prevent Unauthorized Connection with Firewall

The built-in firewall can prevent unauthorized logins, and control which services can be accessed. In addition, you can choose to allow or deny access to certain network ports from specific IP addresses.



Go to **Main Menu** > **Control Panel** > **Firewall** to create firewall rules.

> ***Note:*** You can create up to 100 rules for Synology DiskStation.

To create a firewall rule:

1. Click the **General**, **LAN 1**, **LAN 2** (dual LAN models only), **LAN**, **PPPoE**, or **Wireless Network** tab, depending on the type of your network connection.
2. Click **Create** to open the settings window.
3. Choose an option in the **Ports** section. You can apply the rule to all ports or selected ports using one of the following options:
   - **All**: Choose this option to apply the rule to all ports on Synology DiskStation.
   - **Select from a list of built-in applications**: Tick the system services that will be included in the rule.
   - **Custom**: Specify the type and protocol of the port, and enter the custom port number.
     You can enter up to 15 ports separated with comma, or by specifying a port range.
4. Specify the source IP address in the **Source IP** section. You can choose to allow or deny access from a particular source IP using one of the following options:
   - **All**: Choose this option to apply the rule to all source IP addresses.
   - **Single host**: Choose this option to apply the rule to an IP address.
   - **Subnet**: Choose this option to apply the rule to a subnet.
5. Choose **Allow** or **Deny** in the **Action** section to allow or deny the source IP address to access the specified ports.

Note:

- When you combine 2 networks with link aggregation, firewall will apply the rules from the first network interface, and reserve the rules of the second network interface[1]. For more information about link aggregation, see "Link Aggregation" on Page 24.
- If your system has 2 network ports connecting to the same subnet, the firewall rules might not work properly.

To change the priorities of rules:

Reorder the rules by dragging any of them up or down. Rules at the top will have higher priorities.

To disable rules:

Uncheck the checkboxes next to the rules.

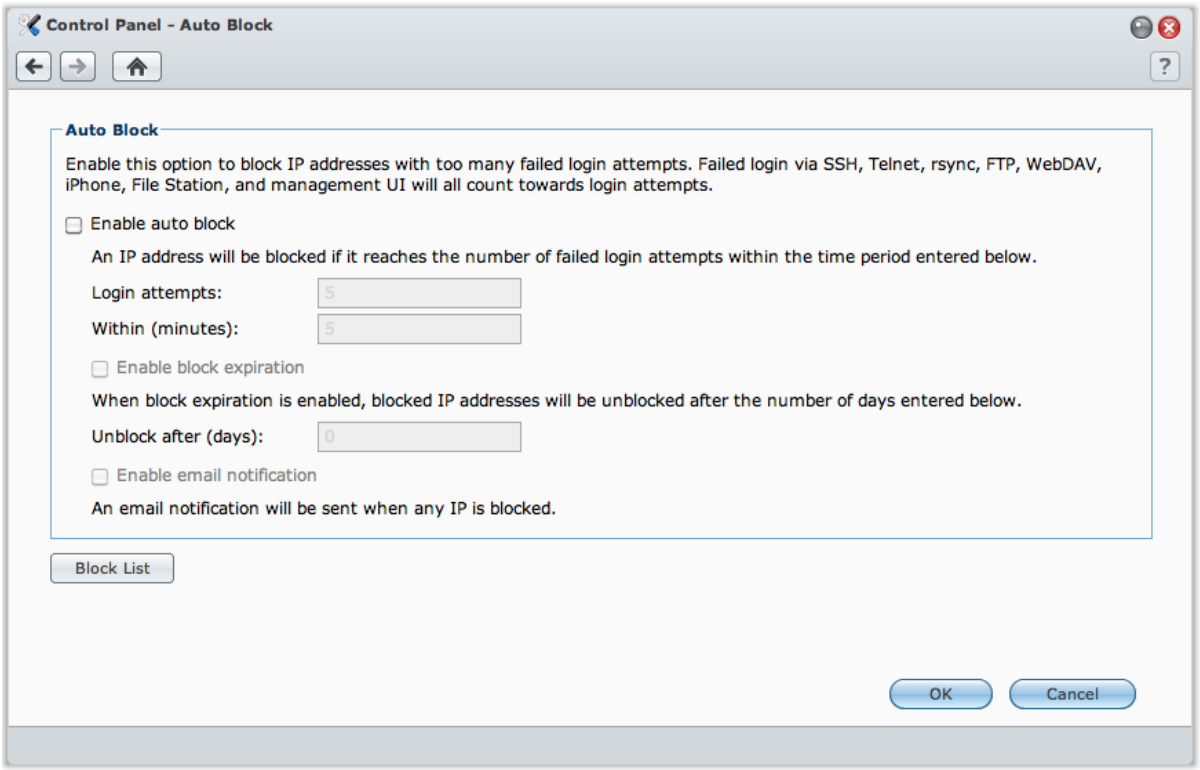
To delete rules:

Select the rules you want to delete and click **Delete**.

Automatically Block Suspicious Login Attempts

Auto block allows you to prevent unauthorized login via SSH, Telnet, rsync, FTP, mobile devices, File Station, and the management UI. After enabling the service, an IP address will be blocked automatically if it has too many failed login attempts.

Go to **Main Menu** > **Control Panel** > **Auto Block** to use the auto block function.



To enable auto block:

1 Tick **Enable auto block**.

2 Enter the following information to block an IP address with a number of failed login attempts within the specified minutes :

- **Login attempts**: The number for failed login attempts
- **Within (minutes)**: The number of minutes

[1] Link Aggregation is supported on specific models only.

3 Tick **Enable block expiration** and enter a number of days in the **Unblock after (days)** field if you want to unblock the IP address after the specified days.

> ***Note:*** The IP address will remain blocked if **Unblock after (days)** is set to **0**.

4 Tick **Enable email notification** to receive email notification when an IP address is blocked. Make sure email notification is enabled for your Synology DiskStation before using this option.

> ***Note:*** For more information about email notification, see "Receive Email Notification" on Page 167.

To manage the blocked IP addresses:

1 Click **Block List** to check the blocked IP addresses.

2 If you want to remove an IP address from the block list, select it and click **Remove**.

Chapter 7

Set Up File Sharing

File sharing is one of Synology DiskStation's major functions. Synology DiskStation can become the file sharing center within the Intranet or over the Internet, allowing users to access its files anytime and anywhere.

This chapter explains how to enable the support for file sharing protocols for all platforms, create and manage users and groups, set up shared folders, and allow or deny access to the shared folders, applications or subfolders from specific users or groups.

Enable File Sharing Protocols for All Platforms

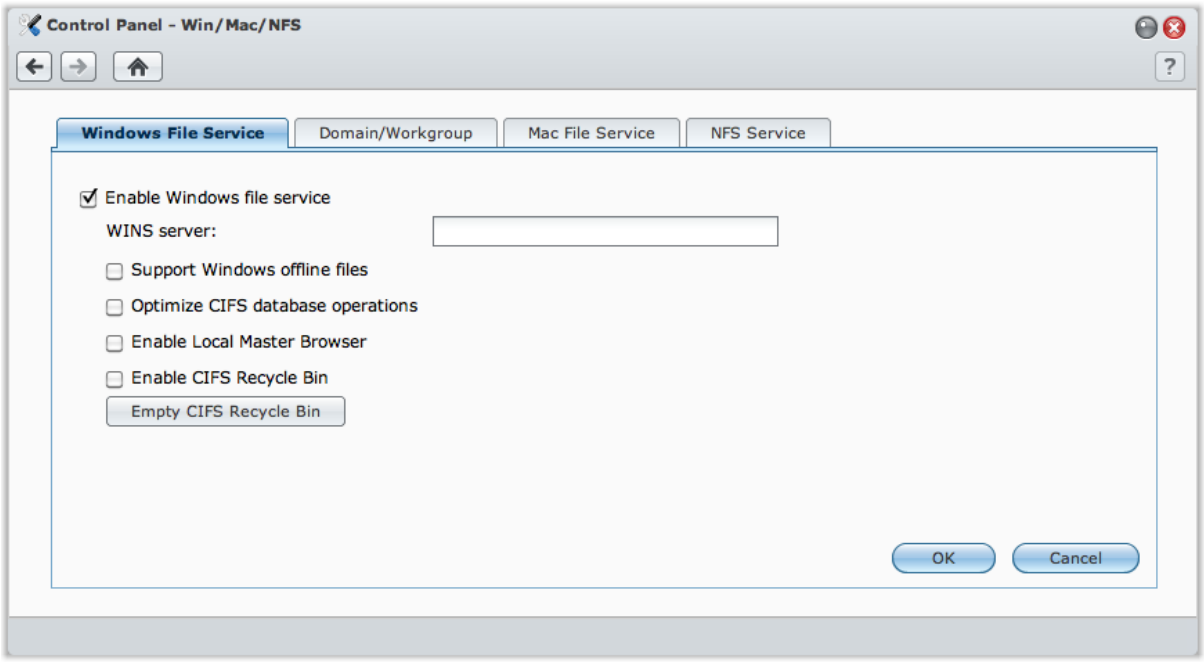
This section tells you how to enable Synology DiskStation to support file sharing protocols for all platforms.

Synology DiskStation supports the following file sharing protocols:

- **For Windows:** SMB/CIFS (My Network Places), FTP, WebDAV
- **For Mac:** SMB, FTP, AFP, WebDAV
- **For Linux:** SMB, FTP, NFS, WebDAV

Manage Windows File Service

Click the **Windows File Service** tab at **Main Menu** > **Control Panel** > **Win/Mac/NFS** to enable Synology DiskStation to be the Windows file server (CIFS server).



To enable Windows file service:

1 Tick **Enable Windows file service**.

2 Click **OK**.

Advanced Settings

WINS Server
Microsoft Windows Internet Name Service (WINS) is a NetBIOS name- to-IP-address mapping service. Window users will locate the system more easily on TCP/IP networks if the system has been configured to register with a WINS server.

Support Windows offline files
This option will enable support for Windows offline files and automatically enables CIFS opportunistic locking. However, enabling this option will affect DiskStation performance when accessing shared folders via network.

Optimize CIFS database operations
Checking this option will disable "Opportunistic Locking" of CIFS, resulting in increased performance when database applications access database files on the shared folder of the Synology DiskStation via network.

Enable Local Master Browser
Enable Synology DiskStation to be the Local Master Browser.

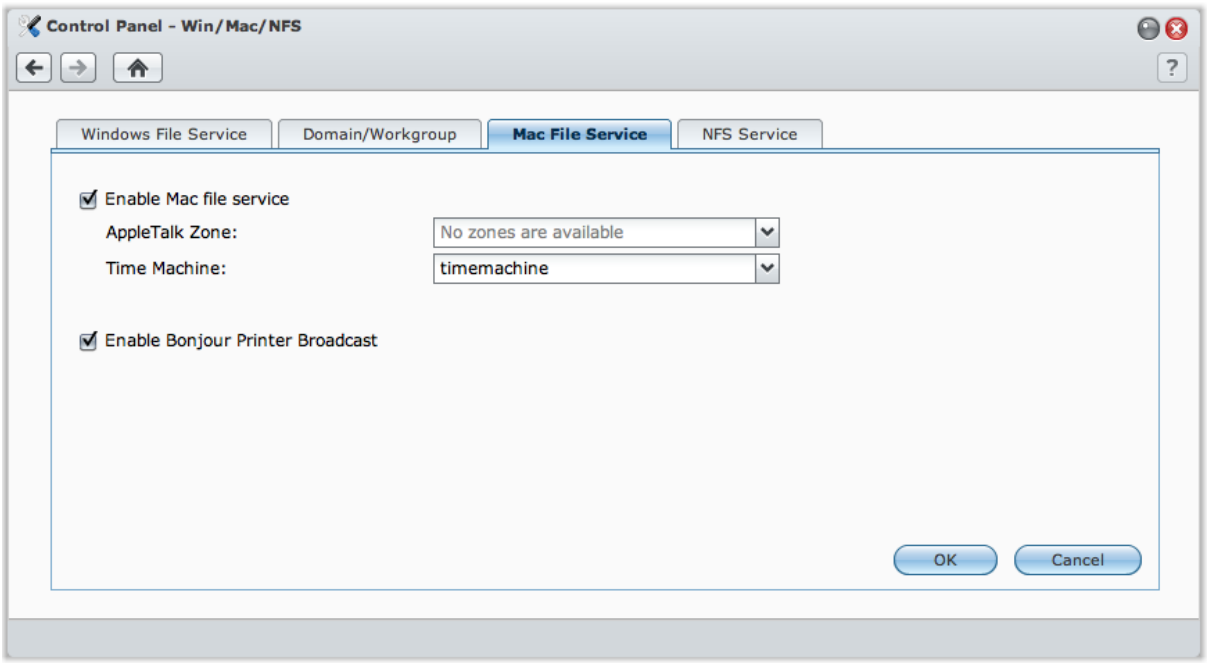
Note: Enabling this function will disable the HDD hibernation mechanism and activate the guest account without password.

Enable CIFS Recycle Bin
Checking this option will enable "Recycle Bin" of CIFS, resulting in moving the deleted files into the CIFS Recycle Bin when users delete files in the shared folders via the CIFS protocol. When users delete files in a shared folder, a folder called "#recycle" will be created automatically under the root directory of the shared folder.

Empty CIFS Recycle Bin
Click **Empty CIFS Recycle Bin** to clean all CIFS Recycle Bins, resulting in deleting all contents of CIFS Recycle Bins in all the shared folders.

Manage Mac File Service

Click the **Mac File Service** tab at **Main Menu** > **Control Panel** > **Win/Mac/NFS** to make Synology DiskStation a Mac file server (AFP Server).



To enable Mac file service:

1 Tick **Enable Mac file service** checkbox to make Synology DiskStation a Mac file server (AFP server).

2 Set **AppleTalk Zone** or **Time Machine** backup folder if necessary. (See the sections below for more information.)

3 Click **OK**.

More Information

About AppleTalk Zone:
A "Zone" is a logical grouping of devices in an AppleTalk network. If there are AppleTalk zones configured in your own network, the system will join the default zone automatically. You can also configure the system to join other available zones.

About Time Machine backup folder:
To backup data from Time Machine to Synology DiskStation, select a shared folder from the drop-down menu.

Shared folders that are being used for other services will not be available for Time Machine.

To enable Bonjour printer broadcast:
Tick **Enable Bonjour Printer Broadcast** to allow Mac clients to browse and locate the printer connected to Synology DiskStation.

Enable NFS Service for Linux Clients

Go to **Main Menu** > **Control Panel** > **Win/Mac/NFS** to allows Linux client to access DiskStation data.

To enable the NFS service:

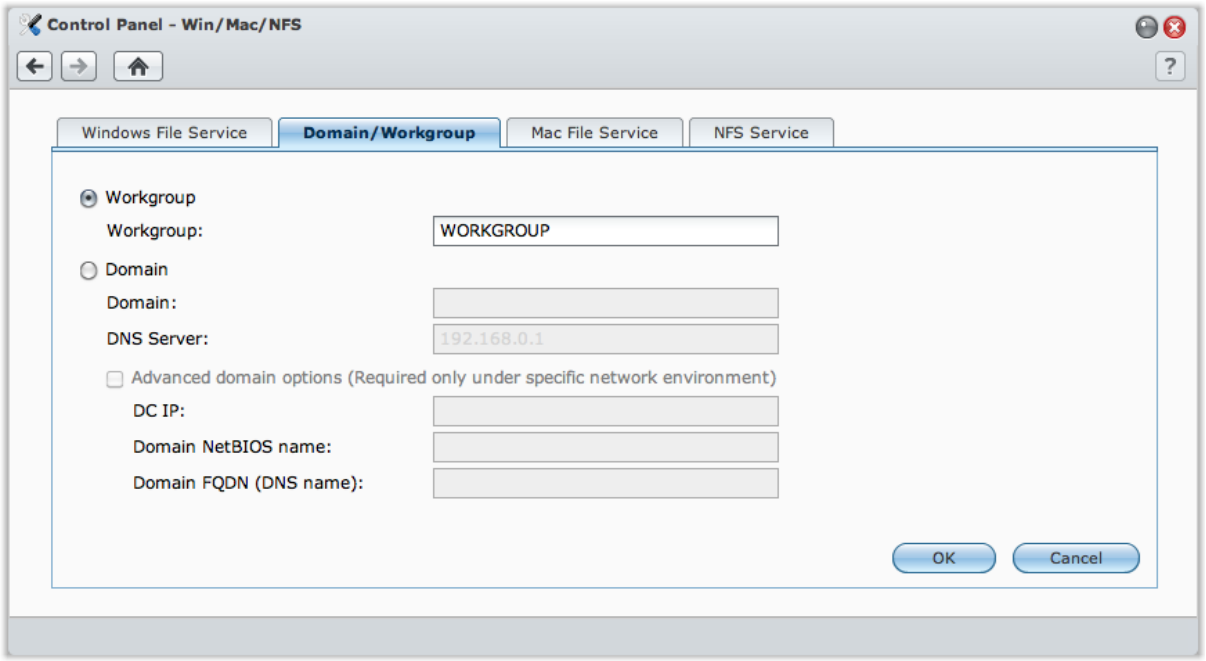
1 Tick **Enable NFS**.

2 Click **OK**.

If you want to configure Linux client's NFS access privileges to the shared folders, see "Allow Users or Groups to Access Shared Folders" on Page 72 for more information.

Join a Windows ADS Domain or Workgroup

Click the **Domain/Workgroup** tab at **Main Menu** > **Control Panel** > **Win/Mac/NFS** to add your Synology DiskStation to a workgroup or domain, depending on your network environment.



To join a workgroup:

Choose **WORKGROUP** and enter the name of the workgroup.

To join a domain:

1. Choose **Domain** and enter the domain name in the **Domain** field and DNS server (optional) in the **DNS Server** field, and click **OK**.
2. In the window that appears, enter the user name and password for the administrator of the domain server, and click **OK**.

After Synology DiskStation joins the domain, domain users can log in to Synology DiskStation with their domain account and password.

> ***Note:*** If your domain user name includes "%" and "$", you might not be able to access your home folder. Please ask your domain administrator to give you a new user name.

You can also configure domain users' access privileges to the shared folders on Synology DiskStation. See "Allow Domain Users or Groups to Access Shared Folders" on Page 73 for more information.

More Information

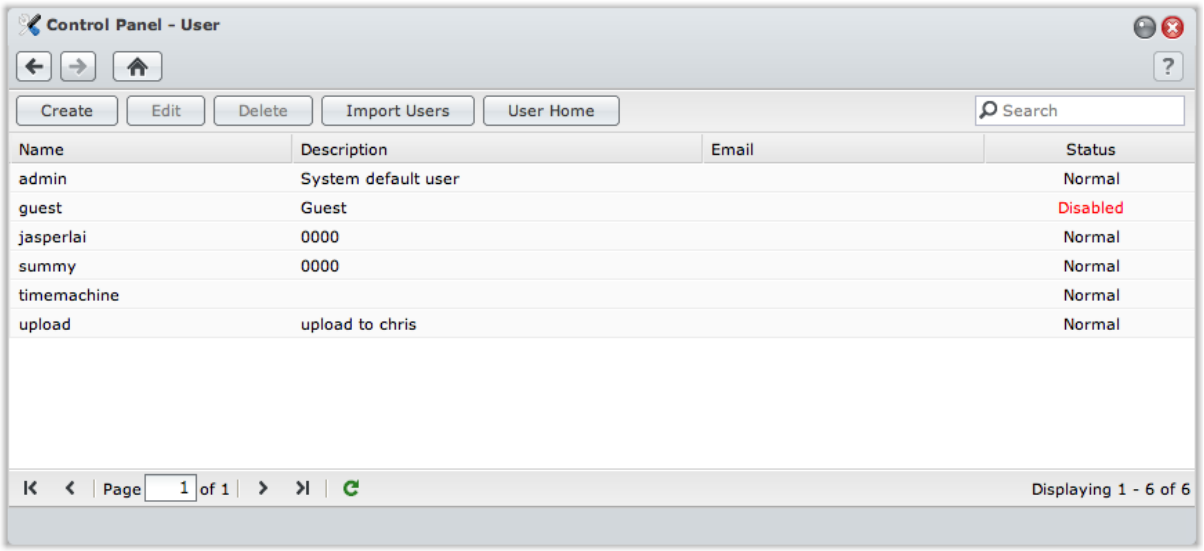
About DNS server:
You are recommended to specify a DNS server to help Synology DiskStation search for the domain. However, if the domain is not registered on the DNS server, the procedure of joining domain may fail.

About advanced domain options:
In most cases, you do not need to fill in any of the advanced domain option. Advanced domain options are needed only for specific domain environment.

- **DC IP**: Specify a DC (Domain Controller) IP and Synology DiskStation will try to communicate with it. If there is more than one IP, insert a comma in between each of them. Add an asterisk (*) after the last DC IP if you wish, and Synology DiskStation will try to communicate with other DC when all specified ones failed. You will need to add a comma between the asterisk and the last IP.
- **Domain NetBIOS name**: Specify the NetBIOS name of the domain.
- **Domain FQDN (DNS name)**: Specify the FQDN (DNS name) of the domain.

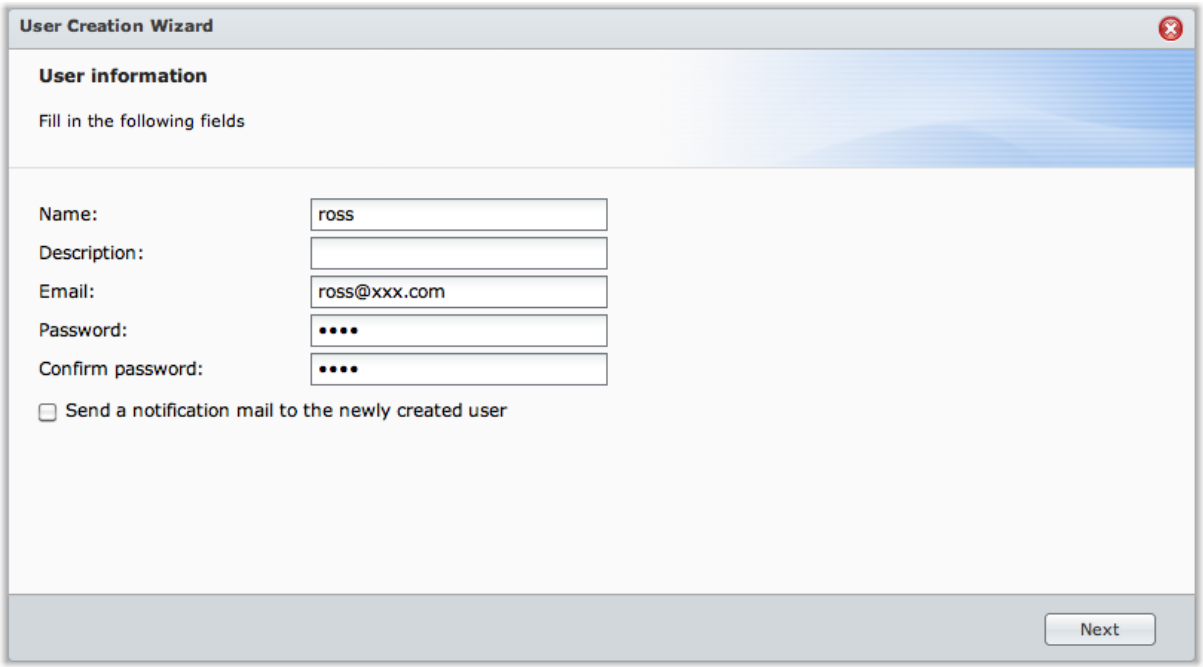
Manage Users and Groups

Go to **Main Menu** > **Control Panel** > **User** or **Group** to create users or groups, and allow or deny their access to different shared folders.



Create and Edit Users

Follow the steps below to create a user account. The user can login to edit his/her account info after the user account has been established. You can also choose to set an account expiration date or disallow the user to change account password.



To create a user account:

1 Click **Create** to open the **User Creation Wizard**.

2 Enter the user name and other information, and click **Next**.

3 In the **Join Group** section, tick the checkboxes to select the user group for the user, and click **Next**. By default, the user is categorized under the **users** group.

> ***Note:*** For more information about groups, see "Create and Edit Groups" on Page 68.

4 In the **Assign Privileges – shared folder** section, do the following:

a Assign the following shared folder privileges for the user:

- **Read/Write**: The user can access and make changes to the files and subfolders in the shared folder.
- **Read only**: The user can access the files and subfolders in the shared folder, but cannot make changes to them.
- **No access**: The user cannot access the files and subfolders in the shared folder.

b See **Privilege preview** to see the user's privilege that is decided based on the privileges setting of the user and the groups joined by the user.

c See **Group privileges** for the shared folder privileges of the group the user belongs to.

> ***Note:***
>
> - When you encounter privilege conflicts, the privilege priority is as follows: **No access** > **Read/Write** > **Read only**.
> - For more information about editing a group's access privileges to shared folders, see "Allow Users or Groups to Access Shared Folders" on Page 72.

5 In the **User quota setting** section, do the following if you want to set the maximum storage quota for the user.

a Tick **Enable quota** and enter a value under the **Quota** column.

b Click **Next**.

6 In the **Assign Privileges – applications** section, assign the application privileges for this user, and click **Next**.

7 Click **Apply** to finish.

To create a user account by importing users list:

1 Create a text file which contains the following tab-delimited information in each line:

- Username
- Password
- Description
- Email
- Quota (MB) in volume 1
- Quota (MB) in volume 2 (and so on)

> ***Note:***
>
> - All fields are optional except **Username**.
> - An example of the text file is shown as follows:

eddy	1234	father	eddy@abc.com	80000
rosy	5678	mother	rosy@abc.com	80000
chaddy	8901	brother	chaddy@abc.com	20000
eric	2345	cousin	eric@abc.com	20000

2 Save the text file in UTF-8 encoding.

3 Go to **Main Menu** > **Control Panel** > **User** and click **Import Users**.

4 Choose the text file and click **OK** to start uploading. Tick **Overwrite duplicate accounts** if you want to replace the existing duplicate accounts with the one from the users list.

After submission, a dialog will show the list of imported users.

> ***Note:*** Users with abnormal status will not be imported.

To edit a user:

1 Select the user you want to edit from the users list and click **Edit** or double-click the user.

2 Make changes to the settings and click **OK**.

> ***Note:***
>
> - If you disable an account, the account will stop functioning.
> - The quota value should be an integer greater than or equal to 0 GB, and less than the disk/volume capacity. A quota value of 0 means unlimited quota size.
> - If there is more than one volume on the server, you can set a quota for the user on every volume.
> - Email information on the "Notification" page must be set correctly in order for the system to notify the user by email after the account information has been created or modified.

To search for a user:

Type the name of the user in the **Search** field and press Enter (PC) or Return (Mac) on your keyboard. The search result will be displayed in the users list below.

This function is especially useful when there are numerous users for your Synology DiskStation.

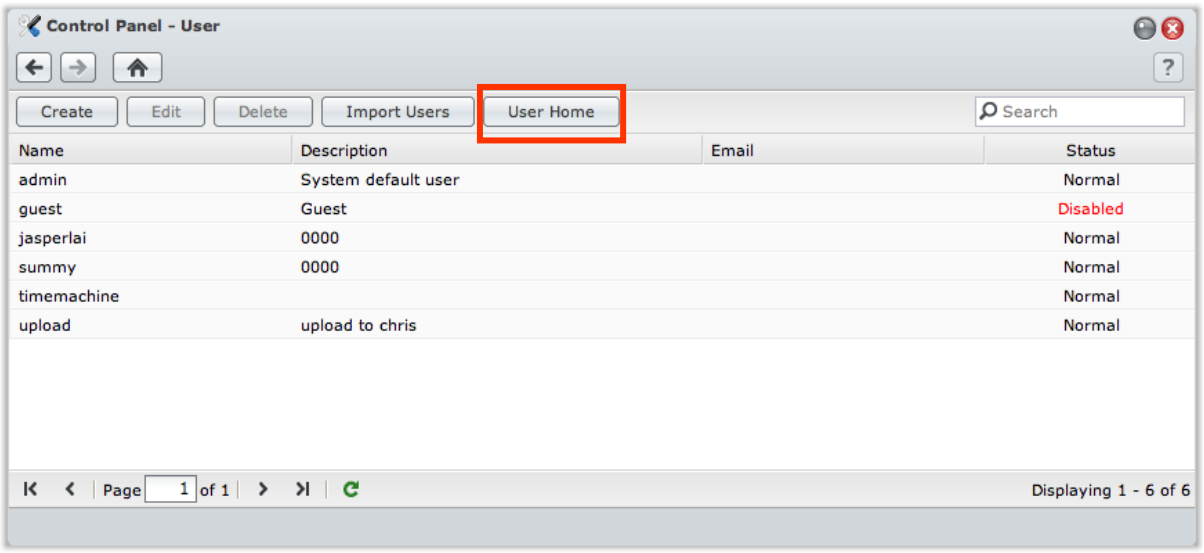
To delete a user:

Select the user you want to delete and click **Delete**.

> ***Note:*** To see domain users in the users list, you must join the domain and assign shared folder privileges for the users. For more information about Windows ADS domain, see "Join a Windows ADS Domain or Workgroup" on Page 62.

Create User's Home Folder

Each user (except for guest) can have his/her own folder called the **home** folder, which is accessible only by the user and the system administrator.



Location and naming of the home folders:

- **For local users**, their home folders are located in the **homes** folder with the same name as the user account.
- **For Windows ADS domain users**, their home folders are located in the folder named **@DH-domain name**. The name of the user's home folder is the user account plus a unique number.

To enable user home service:

1 Click **User Home**.

2 Tick **Enable user home service**.

3 If there are more than one volume on Synology DiskStation, select where you want the **homes** folder to be stored.

4 Click **OK**.

To disable user home service:

1 Click **User Home**.

2 Uncheck **Enable user home service**.

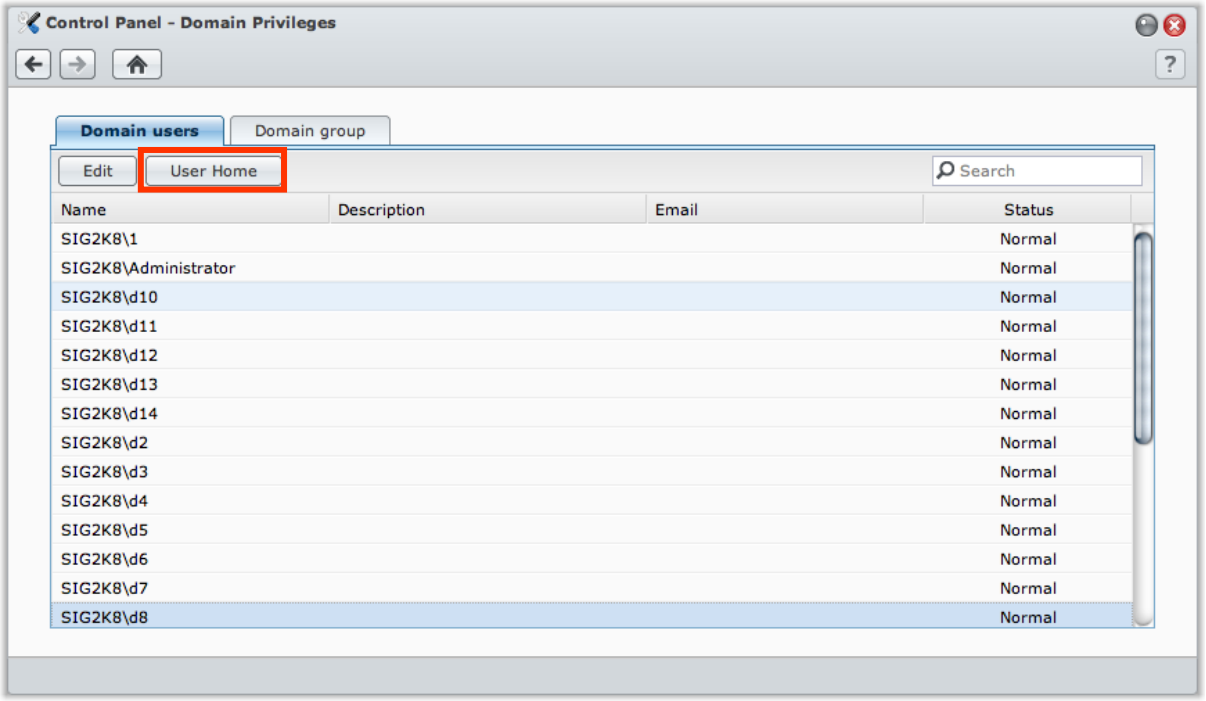
When the user home service is disabled, the **homes** folder will be kept but accessible by **admin** only. Users can access their home folders again if the user home service is enabled again.

Note:

- To delete the **homes** folder, the user home service must be disabled first.
- The domain user home service would be disabled if the local user home service is disabled.

Create Domain User's Home Folder

Go to **Main Menu** > **Control Panel** > **Domain Privileges** to create domain user's home folder.



Like local users, all domain users can access their own home folder via CIFS, AFP, FTP, WebDAV, File Browser or File Station.

admin can access all personal folders located in the **homes** default shared folder.

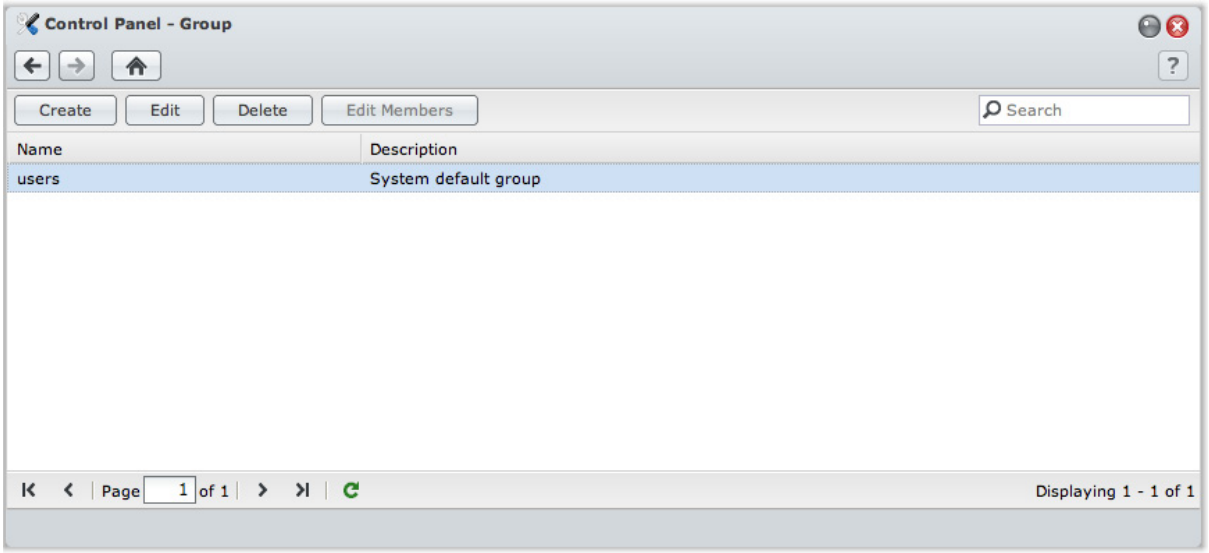
All domain users' home folders are located in one of the sub-folders under a folder named **@DH-domain name**. The name of the user's home folder is the user account plus an unique number.

Note:

- To delete the **homes** shared folder, user home service must be disabled first.
- Enabling domain user home service will also enable the local user home service if it's not enabled yet.
- The domain user home service would be disabled if the local user home service is disabled.

Create and Edit Groups

Go to **Main Menu** > **Control Panel** > **Group** to create and edit a group, add users to the group, and then edit the group's properties, saving you the trouble of editing users one by one.



To create a new group:

1 Click **Create** and enter the group name and description.

2 Click **OK**.

To edit a group's name and description:

1 Select the group you want to edit from the groups list and click **Edit** or double-click the group.

2 Make changes to the settings and click **OK**.

To delete a group:

Select the group you want to delete from the groups list and click **Delete**.

To add or remove group members:

1 Select the group you want to add users to from the groups list and click **Edit Members**.

2 Click **Add** or **Remove**, select users from the users list, and click **OK**. (Press and hold Shift or Ctrl while making multiple selections.)

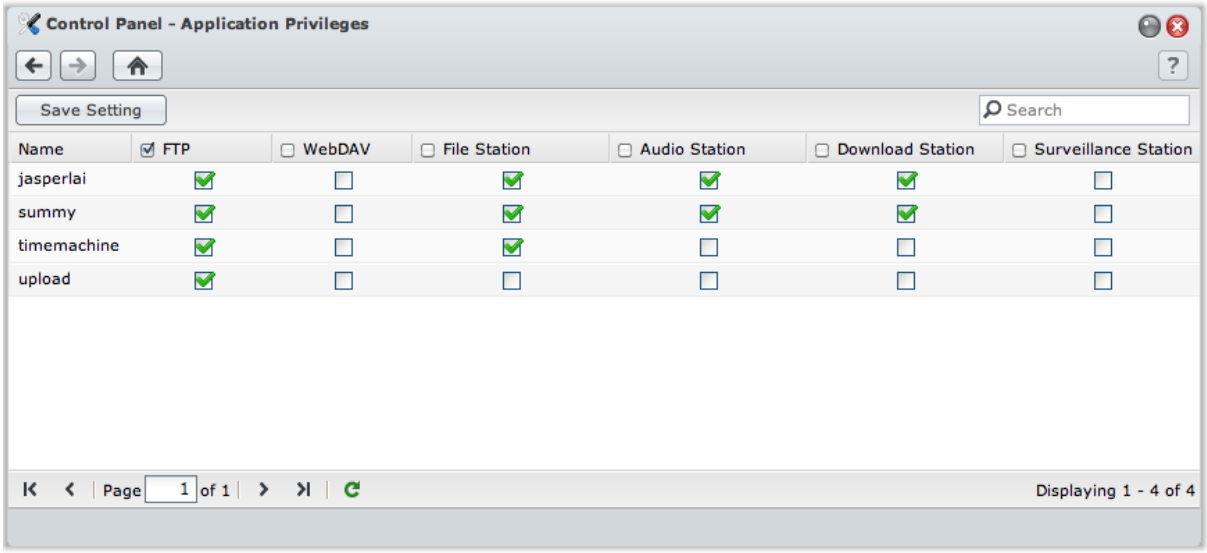
3 Click **Finish**.

Note:

- By default, all users belong to the **users** group
- For more information about editing a group's access privileges to shared folders, see "Allow Users or Groups to Access Shared Folders" on Page 72.

Allow Users to Access Applications

Go to **Main Menu** > **Control Panel** > **Application Privileges** to decide which applications could be accessed by a user.



To allow users to access applications for Synology DiskStation:

1 Do any of the following:

- Tick the checkboxes under **FTP**, **WebDAV**, **File Station**, **Audio Station**, **Download Station**, or **Surveillance Station** to allow users to access the applications.
- Tick the checkbox next to an application to allow all users on the current page to access the application.

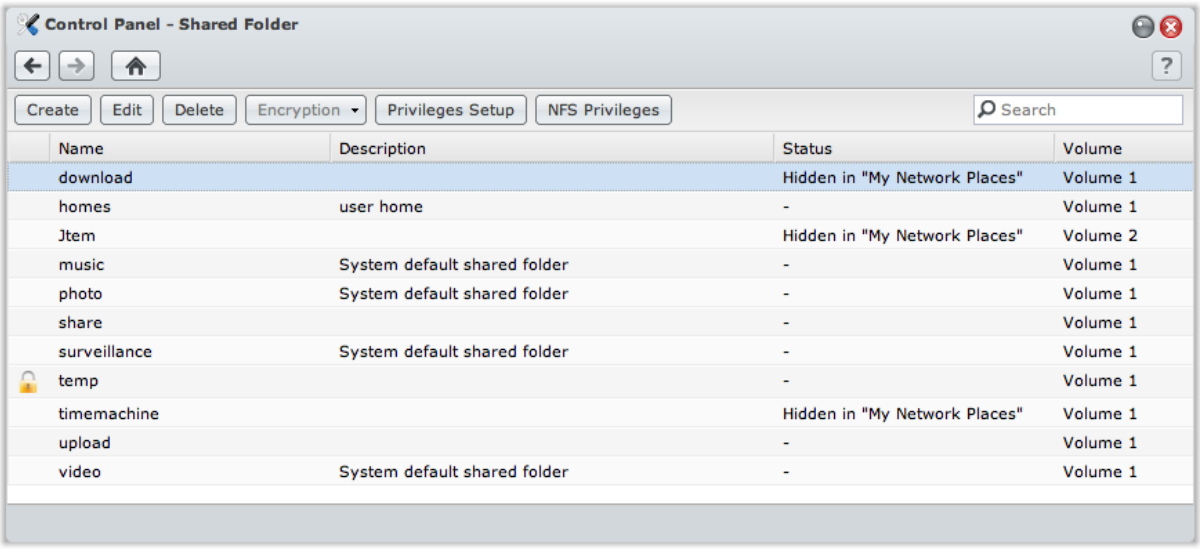
2 Click **Save Settings** after setup is finished.

Note:

- You can also use the search field to find multiple users, and allow or disallow them to access applications.
- The users list excludes **admin**, **guest**, and domain users.

Set Up Shared Folders

Go to **Main Menu** > **Control Panel** > **Shared Folder** to manage the shared folders, which are the root folders of Synology DiskStation. (Folders within the shared folders are called **subfolders**.) You can store data in the shared folders and share them with users or groups with access privileges.



Built-in Shared Folders Created by the System

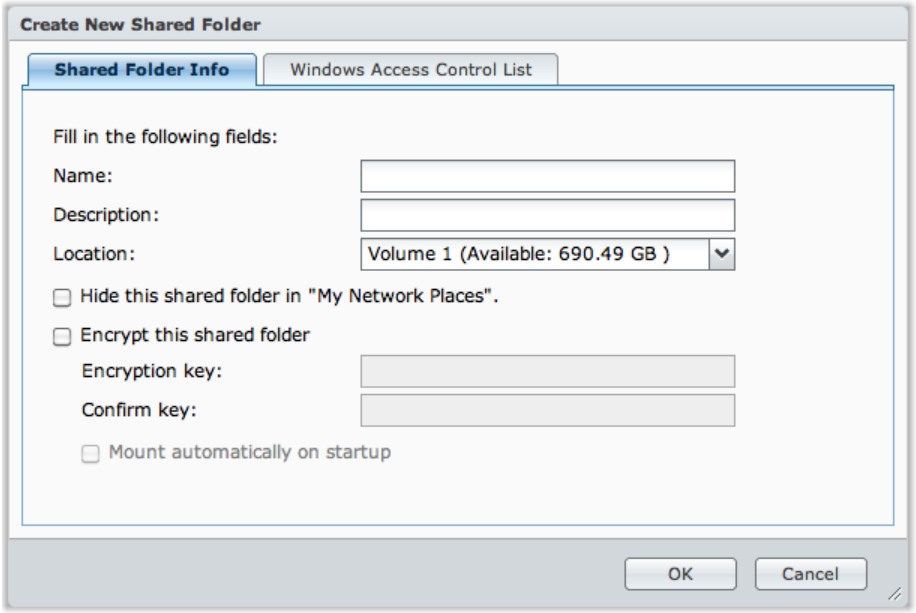
System built-in shared folders are created when the services or applications requiring the folders are enabled.

System built-in shared folders include the following:

Name	Description
public	The **public** folder will be created automatically after the first time you set up Synology 1-bay models.
web	The **web** folder contains contents of your website. It will be created automatically when Web Station is enabled. For more information about Web Station, see "Use Web Station to Host Websites" on Page 99.
photo	The **photo** folder contains photos and videos you want to share on Photo Station. It will be created automatically when Photo Station or DLNA/UPnP Media Server is enabled. For more information about Photo Station and media server, see "Chapter 11: Share Photos, Videos, and Blogs with Photo Station" on Page 107 and "Manage DLNA Media Server" on Page 155.
music	The **music** folder contains music you want to share on Audio Station. It will be created automatically when Audio Station is enabled. For more information about Audio Station, see "Chapter 12: Play Music with Audio Station" on Page 116.
video	The **video** folder contains videos you want to browse through DLNA/UPnP DMA. It will be created automatically when Media Server is enabled. For more information about Media Server, see "Manage DLNA Media Server" on Page 155.
surveillance	The **surveillance** folder contains Surveillance Station recordings. It will be created automatically when Surveillance Station is enabled. It is read-only and can only be accessed by the system administrator. For more information about Surveillance Station, see "Chapter 14: Safeguard Your Environment with Surveillance Station" on Page 135.
home	The **home** folder provides a private space for each user to store data where only the user can access. It will be created automatically when User Home is enabled. For more information about User Home, see "Create User's Home Folder" on Page 66.
homes	The **homes** folder contains the home folders of all users. It will be created automatically when User Home is enabled. Only system administrator can access and manage all users' home folders. For more information about User Home, see "Create User's Home Folder" on Page 66.
NetBackup	The **NetBackup** folder is created automatically when Network Backup Service is enabled. For more information about network backup, see "Network Backup" on Page 94.
usbshare	The **usbshare1** folder is created automatically when you connect an USB disk to Synology DiskStation's USB port. For more information about external USB disks, see "Manage External Disks" on Page 47.
satashare	The **satashare** folder is created automatically when you connect an eSATA disk to Synology DiskStation's eSATA port. For more information about external eSATA disks, see "Manage External Disks" on Page 47.

Create a Shared Folder

If you are **admin**, you can also create shared folders and assign access privileges to the folders.



To create a new shared folder:

1 Click **Create**.

2 Enter the name and description for the shared folder, and select a volume[1] where the folder will be created.

3 Tick **Hide this shared folder in "My Network Places"** if you want to hide the folder in Windows "My Network Places".

> ***Note:*** If you have access privilege to a shared folder hidden in "My Network Places", you can still access it by pressing Windows-R and entering **\\Synology_Server_Name\Shared_Folder_Name** in the **Open** field.

4 If you want to encrypt the shared folder, do the following:

- **a** Tick **Encrypt this shared folder** in the window that appears, and then enter the encryption key in the **Encryption key** field, and enter the same key again in the **Confirm key** field to confirm it.
- **b** Tick **Mount automatically on startup** to mount the encrypted folder automatically for access. If you didn't tick this checkbox, the encrypted folder will be unmounted next time Synology DiskStation restarts. To view or access an unmounted folder, you will need to mount the folder manually by importing or entering the encryption key.

5 If you want to define Windows ACL privileges for the shared folder, click the **Windows Access Control List** tab. See "Define Windows ACL Privileges for Shared Folder" on Page 75 for more information.

6 Click **OK**.

> ***Note:*** One Synology DiskStation can contain up to 100 or 200[2] share folders, including the built-in shared folders.

Remove a Shared Folder

If you are **admin**, you can remove any shared folder created by yourself.

To remove a shared folder

1 Select the shared folder you want to remove from the shared folder list.

2 Click **Delete**, and tick the checkbox on the dialogue prompt for confirmation.

3 Click **OK**.

---

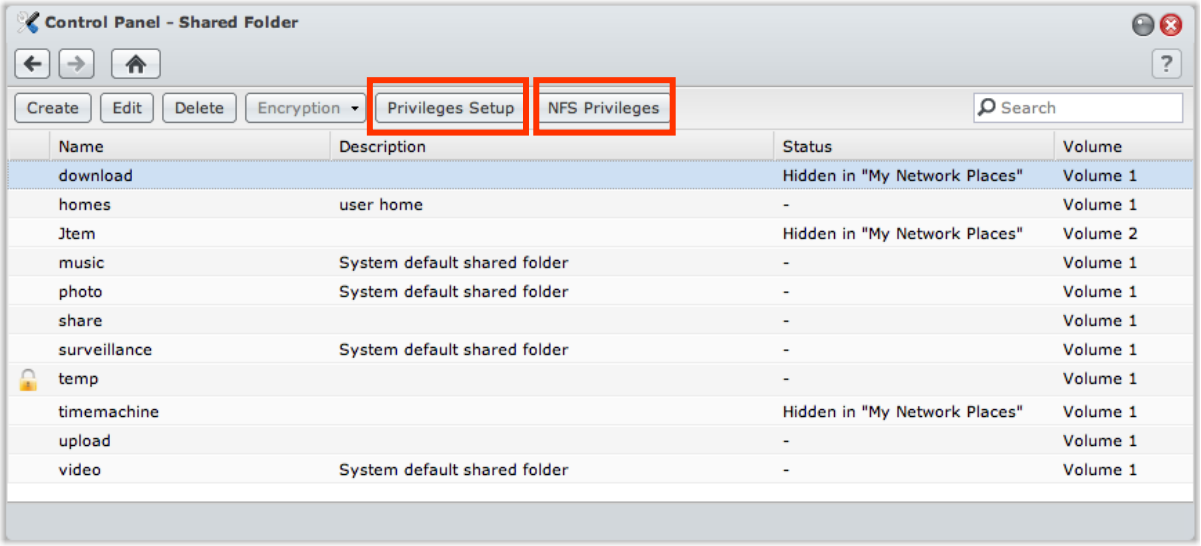
[1] Multiple volumes are available only on DiskStation with more than 1 bay.

[2] 200 shared folders are supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

Important: Removing any shared folder also removes all data within it. If you still need the data, back them up first.

Allow Users or Groups to Access Shared Folders

Go to **Main Menu** > **Control Panel** > **Shared Folder** to allow or deny users' or groups' access to the shared folders.



To allow users or groups to access a shared folder:

1 Select the shared folder you want to edit from the shared folders list, and click **Privileges Setup** to open the settings window.

2 Click the **Privilege Setup** tab, and select any of the following from the drop-down menu:

- **System Internal user**: Anonymous FTP user. Before allowing anonymous FTP users to connect to a shared folder, you need to allow their access to the folder first. For more information about anonymous FTP, see "Manage FTP Security Settings" on Page 83.
- **Local users**: Synology DiskStation users (including **guest**). See "Manage Users and Groups" on Page 63 for more information.
- **Local groups**: Synology DiskStation groups. See "Manage Users and Groups" on Page 63 for more information.

3 Tick or uncheck the following privileges to assign access privileges for the users or groups:

- **Read/Write** (RW): The user or group can access and make changes to the files and subfolders in the shared folder.
- **Read only** (RO): The user or group can access the files and subfolders in the shared folder, but cannot make changes to them.
- **No access** (NA): The user or group cannot access the files and subfolders in the shared folder.

> ***Note:*** To set the access privileges to subfolders, you can use File Browser. See "Allow Users and Groups to Access Files and Subfolders" on Page 89 for more information.

4 Click the **Advanced privileges** tab if you want to do any of the following:

- Disable directory browsing
- Disable modification of existing files
- Disable file downloading

5 Click **OK**.

> ***Note:***
>
> - When you encounter privilege conflicts, the privilege priority is as follows: **No access** > **Read/Write** > **Read only**.
> - When you create a new shared folder, if the admin account's access privilege to the folder is set as **No access**, then the admin will only be able to see the folder by going to **Main Menu** > **Control Panel** > **Shared Folder**.

To allow Linux clients to access a shared folder:

1 Select the shared folder you want to edit from the shared folder list, and click **NFS Privileges**.

2 Click **Create** to open the settings window.

3 Enter a **Hostname or IP**. You may specify a host in three ways:

- **Single Host:** The fully qualified domain name, or an IP address.
- **Wildcards:** *,* .synology.com
- **IP networks:** 203.74.205.32/255.255.252.0, /24

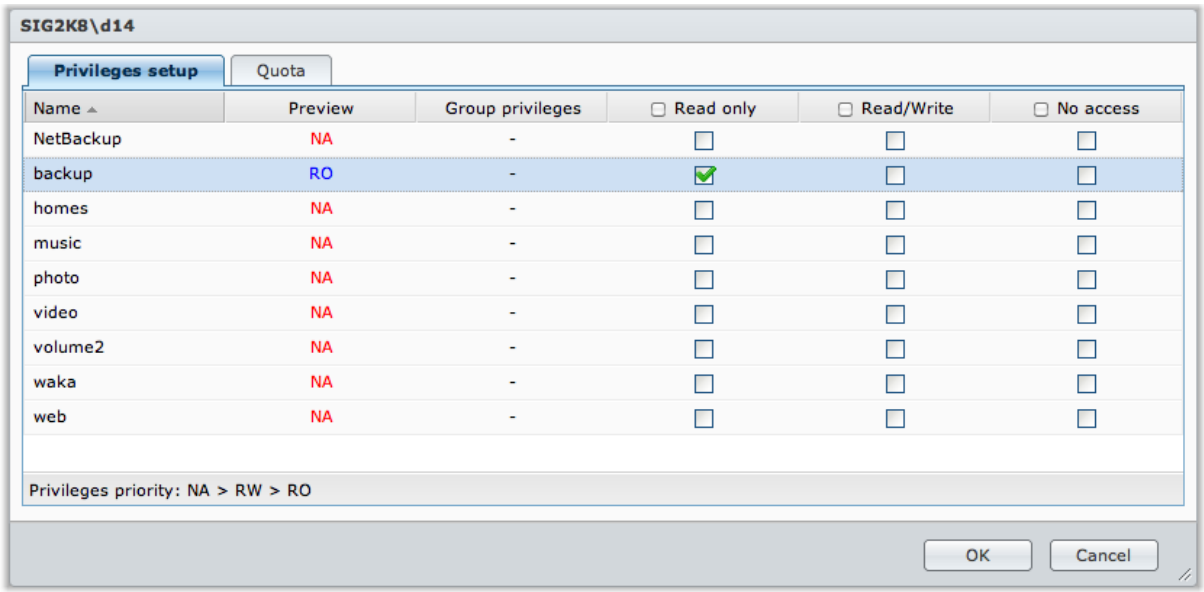
4 Assign **Privilege**, assign **Root Squash**, or tick **Enable asynchronous**, and click **OK**.

5 Click **OK**.

Term Explanation
Asynchronous: NFS servers will reply to requests before the changes on the file are completed.

Allow Domain Users or Groups to Access Shared Folders

Go to **Main Menu** > **Control Panel** > **Domain Privileges** to set up and modify the access permission of a domain user or group, and enable the home service for all domain users.



To Manage Domain Users' Access Privileges:

admin can setup the share folder permission and the quota of disk capacity of each domain user. The rule of settings are:

- **Privileges priority:** NA > RW > RO.
- **Privilege preview:** User's privilege would be shown here, and that is decided based on the privileges setting of the user and the groups joined by the user.
- **Group privileges:** Assign privileges to groups access to access shared folders.

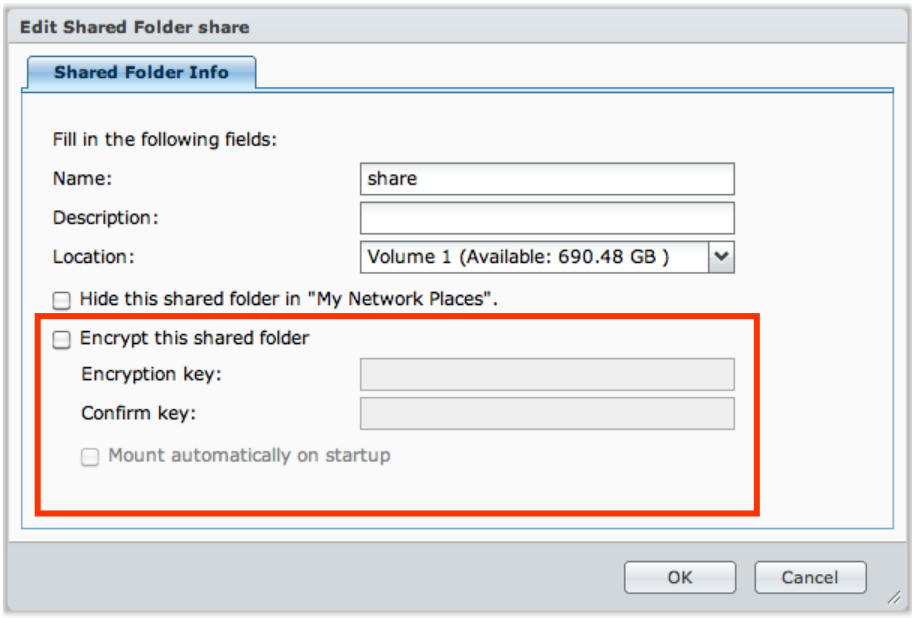
To Manage Domain Group's Access Privileges:

For each domain group, you can also configure the permission of all share folders. The priority of privileges is: NA > RW > RO.

Encrypt a Shared Folder

Go to **Main Menu** > **Control Panel** > **Shared Folder** to encrypt your shared folder. [1]

The AES 256-bit encryption can block off all unauthorized access attempts. Without the encryption key, other people will not be able to use the encrypted data even if they remove the hard drives from your Synology DiskStation and mount it on their device.



To encrypt a shared folder:

1. Select a shared folder you want to encrypt, and then click **Edit** to open the settings window.
2. Tick **Encrypt this shared folder**, enter the encryption key in the **Encryption key** field, and enter the same key again in the **Confirm key** field.
3. Tick **Mount automatically on startup** to mount the encrypted folder automatically after Synology DiskStation starts up next time. By default, encrypted shared folder will be unmounted automatically on startup for security reasons.

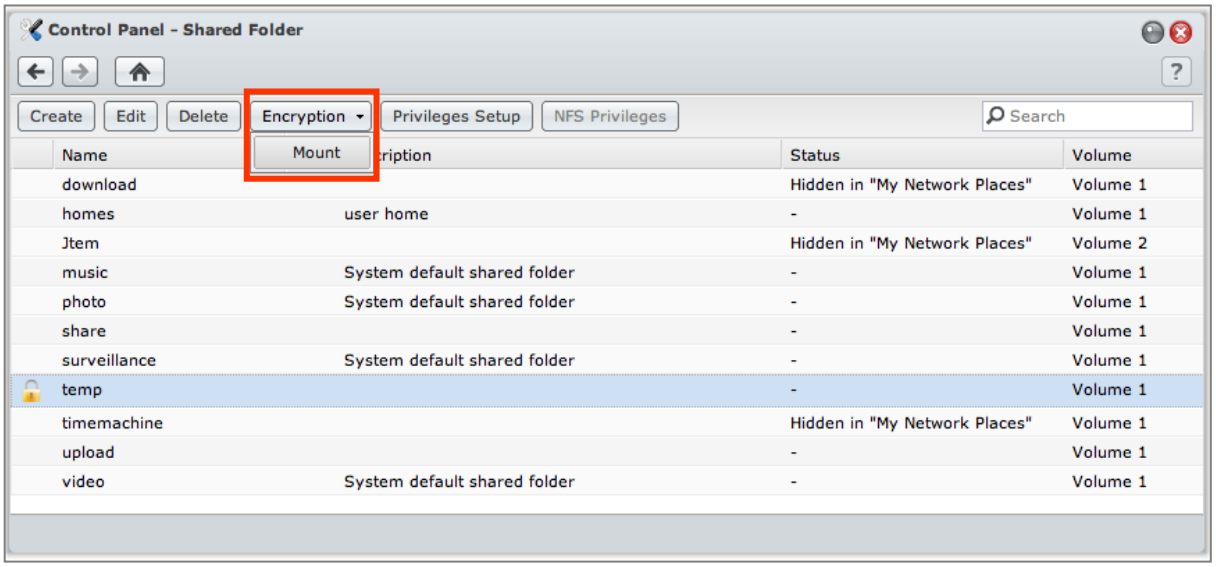
Note:

- You can also encrypt a folder when you create it.
- The following built-in shared folders are not allowed for encryption since they are associated with system services: web, photo, music, video, surveillance, download, Netbackup.
- Encrypted shared folders cannot be accessed via NFS. If you encrypt a shared folder containing NFS rules, they will be removed.

[1] Shared folder encryption is supported on specific models only.

Edit an Encrypted Folder

After the folder is encrypted, you can use the **Encryption** drop-down menu to edit the folder.



The items shown in the menu depend on the status of the selected shared folder:

- **For unencrypted shared folder,** the **Encryption** drop-down menu is disabled.
- **For an encrypted shared folder which is mounted,** you can choose **Unmount** from the **Encryption** drop-down menu to unmount the folder, or **Export key** to save the encryption key.
- **For an encrypted shared folder which is unmounted,** you can choose **Mount** from **Encryption** drop-down menu, and then enter or import the encryption key to mount the folder for access.

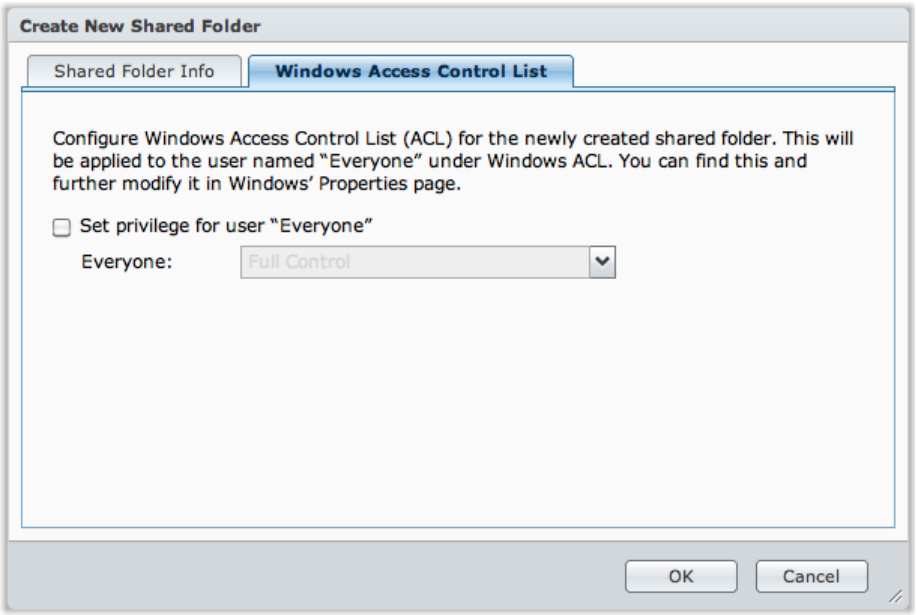
Note:

- **It is very important to remember the encryption key.** It is strongly recommended that you export and save the encryption key. If you forget or lose the key, there is no way to rescue the encrypted data.
- If an encrypted folder is unmounted, you cannot rename it or change its volume location.

Define Windows ACL Privileges for Shared Folder

Windows Access Control List (ACL) is a list of privileges or permissions that determine specific access rights under the Windows environment. This can help administrator define access control rules for an individual file or a directory, and give different access rights for individual user or group.

Through Windows ACL, you can assign different privileges to local and domain users in the system. The privileges apply to all file-related applications, such as FTP, File Station, NFS, AFP, WebDAV, etc.



To define Windows ACL settings for a shared folder:

You can define initial Windows ACL settings when creating a shared folder. Follow the steps below:

1. Click **Shared Folder** in **Control Panel**.
2. Click **Create** to create a shared folder.
3. Under the **Shared Folder Info** tab, enter the fields required.
4. Under the **Windows Access Control List** tab, check the **Set privilege for user "Everyone"** checkbox to initialize Windows ACL support.
5. Select from the drop-down menu to set the initial privilege for **Everyone**.
6. Click **OK** to finish.

To edit Windows ACL settings:

You can further edit Windows ACL settings for a shared folder under Windows "Properties" page. Follow the steps below:

1. In Windows, log into DiskStation using **Windows Explorer**.
2. Locate the shared folder or the file you want to manage.
3. Right-click on the folder or the file and choose **Properties**.
4. Go to the **Security** tab. You'll find the **Everyone** in the **Group or user name** section.
5. Click **Edit**.
6. In the **Group or user name** section, click **Everyone**.
7. Set the privileges in the **Permission for Everyone** section.
8. Click **OK** to save the settings.
9. Click **OK**.

Advanced Settings

Besides editing the privilege for **Everyone**, you can also define the access permissions for individual DiskStation account on a certain file or folder. This includes domain user accounts as well. Follow the steps below:

1. Follow steps 1~5 in **To edit Windows ACL settings**.
2. Click **Add**.
3. Click **Advanced**.
4. Click **Search Now**. The search result will include all user and groups, including domain user accounts, in your DiskStation.
5. Select the account you want to add, click **OK**.
6. Click **OK**.
7. In the **Group or user name** section, click on the account you just added.
8. Follow steps 7~9 in **To edit Windows ACL settings** to finish.

When there's a conflict between Windows ACL settings and the shared folder privileges, the system will automatically adopt the settings the two may have in common. For example, if the shared folder privilege is "Read/Write", but ACL privilege is "Read". Then final privilege will be only be "Read".

Note:

- Windows ACL is only supported on EXT4 file system. For previous DSM 2.3 users, you need to create at least one EXT4 volume to use ACL feature. This means, you have to format at least one hard disk and re-create a volume. **Formatting DiskStation will result in erasing all stored data and settings. Please make sure all your data is backed up before processing.**
- To define new privileges for domain users, make sure DSM and Windows clients are in the same domain.
- The ACL privileges of the following shared folders cannot be modified: **photo**, **surveillance**, **web**.

Chapter 8

Access Files from Anywhere

When you have set up users or groups with proper access privileges to the shared folders, they can share their files with your Synology DiskStation from anywhere.

This chapter explains the ways to access the Synology DiskStation shared folders within the Intranet or over the Internet.

Access Files within the Intranet

This section explains how to allow users to use Windows, Mac, or Linux computer to access shared folders on Synology DiskStation within the Intranet.

> ***Note:*** Before accessing, make sure the relative file sharing protocols have been enabled for your Synology DiskStation. See "Enable File Sharing Protocols for All Platforms" on Page 59 for more information.

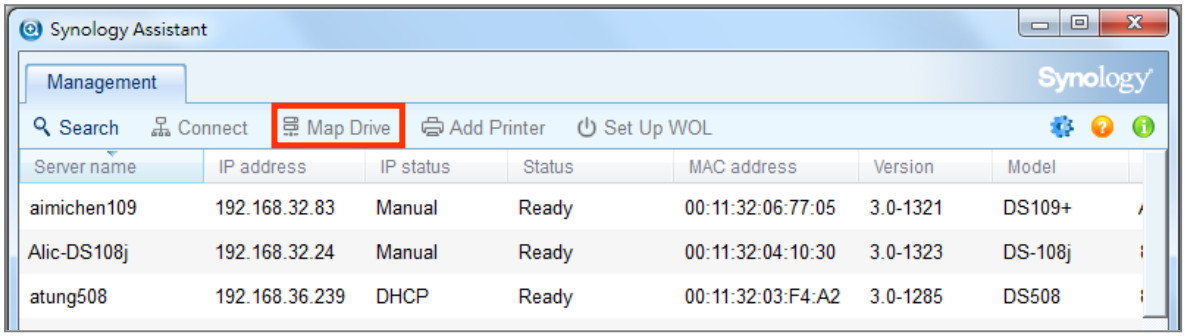
Access Shared Folders from Windows

To access shared folders from Windows, you can use any of the following methods.

Method 1: Use Synology Assistant to map the shared folders as network drives.

1 Run Synology Assistant and select the server from the server list.

2 Click **Map Drive** and follow the onscreen steps to finish the setup.

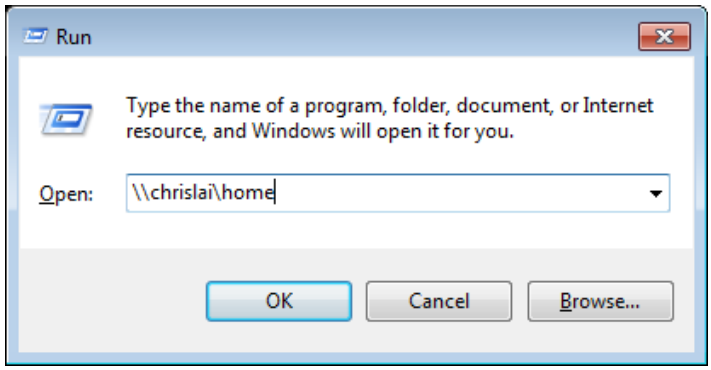


Upon completion, you can access the mapped shared folder directly in Windows Explorer.

Method 2: Use the Run window.

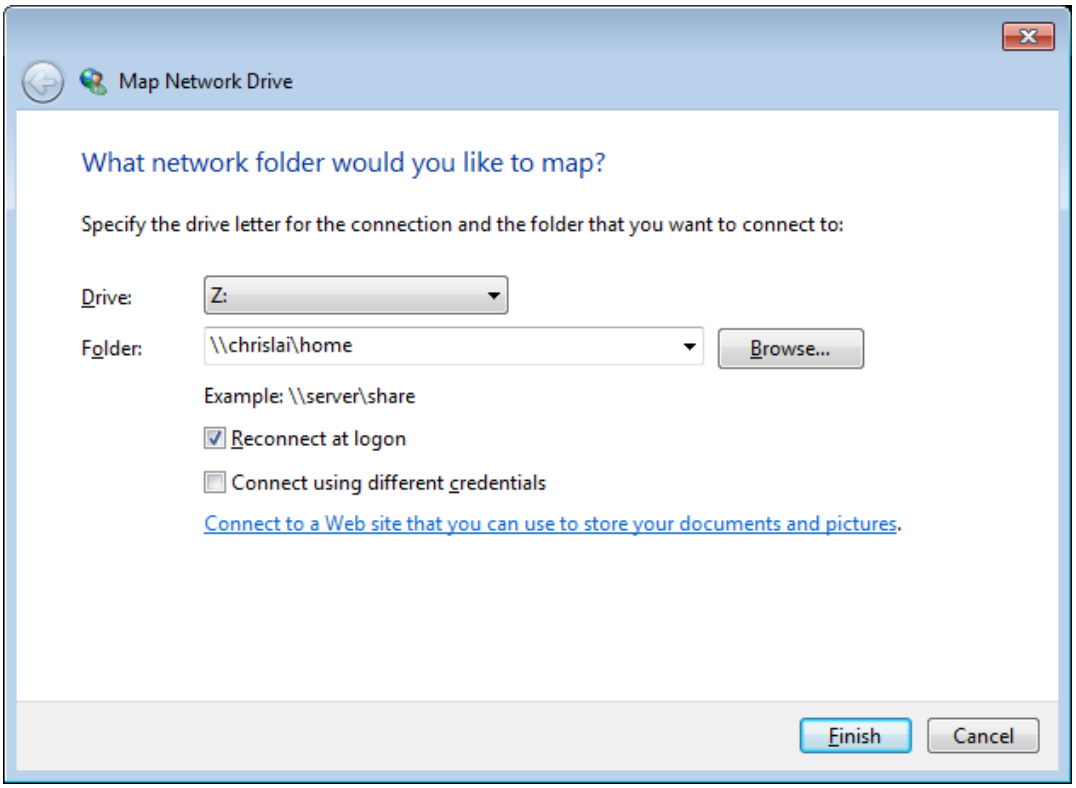
1 Press Windows-R to open the **Run** window.

2 Enter **\\Synology_Server_Name\Shared_Folder_Name** in the **Open** field.



Method 3: Use Window Explorer.

1 Open a Windows Explorer window and choose **Tools** > **Map network drive** to show the **Map Network Drive** window.



2 Choose a drive number from the **Drive** drop-down menu.

3 Locate the shared folder by doing one of the following:

- Enter **\\Synology_Server_Name\Shared_Folder_Name** in the **Folder** field.
- Click **Browse** to locate the shared folder, and then click **OK**.

4 Click **Finish**.

5 Enter your user name and password for Synology DiskStation Manager and click **OK**.

Upon completion, you can access the mapped shared folder directly in Windows Explorer.

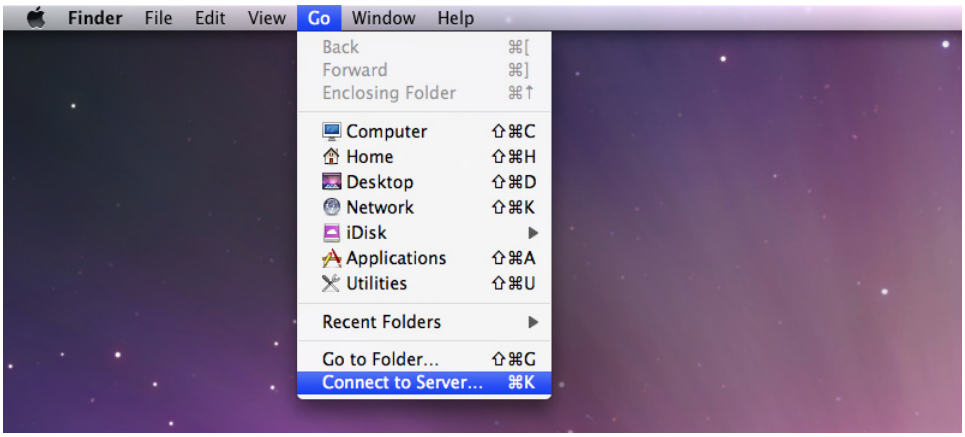
Access Shared Folders from Mac

1 Choose **Go** > **Connect to Server** from the menu bar.

2 Type Synology DiskStation's IP address or server name (appended with **.local**) preceded by **smb://** or **afp://** in the **Server Address** field and click **Connect**. (e.g. **smb://EricaWang.local** or **afp://192.168.0.2**)

> ***Note:*** For better performance, it is recommended that you connect to the shared folders via SMB.

3 Select the shared folder you want to access. Upon completion, you can access the shared folder in the Finder window.



Access Shared Folders from Linux

1 In Synology DiskStation Manager, Go to **Main Menu** > **Control Panel** > **Shared Folder**.

2 Select the shared folder you want to access, click **NFS Privileges**, and find the mount path at the bottom of the window that appears.

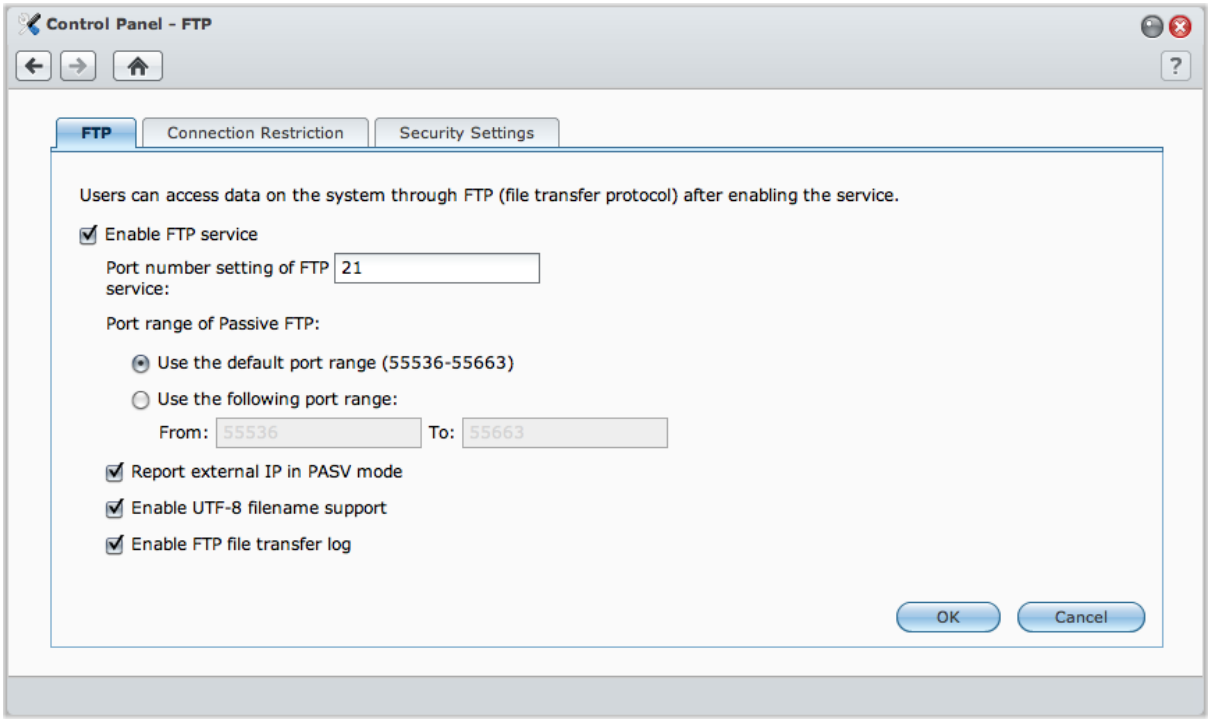
3 On a Linux computer, enter the mount path to mount the shared folders.

Access Files via FTP

If your Synology DiskStation is accessible over the Internet, you can use a FTP application to access the shared folders.

> ***Note:*** For more information about making Synology DiskStation accessible over the Internet, see "Chapter 5: Connect from the Internet" on Page 48.

Go to **Main Menu** > **Control Panel** > **FTP** to enable FTP service, allowing users to upload or download Synology DiskStation data via FTP.



To enable FTP service:

1 Tick **Enable FTP service**.

2 Enter a value in **Port number setting of FTP service** (The default number is 21).

3 Specify the **Port range of Passive FTP** (PASV) by using the default range (55536-55663) or entering any range between 1025 and 65535.

4 Click **OK**.

> ***Note:***
>
> - The default port number for the FTP service is 21. You can set it from 1 to 65535, excluding the following numbers: 20, 22, 23, 25, 80, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5005, 5006, 5335, 5432, 9997, 9998, 9999, BitTorrent default port range: 6881-6890, and Surveillance Station default port range: 55736-55863.
> - The port range of Passive (PASV) FTP can be from 1025 to 65535. It can contain up to 128 ports.
> - The **guest** account cannot log in to DiskStation via FTP.
> - The codepage setting on the FTP client computer must be the same as that of the Synology DiskStation in order to access the data correctly.
> - On some specific models, FTP service supports connecting using SSL or TLS.

Advanced Settings

Report external IP in PASV mode
By enabling this option, the server will report its external IP to FTP clients. The reported IP will be listed in the connection log of the FTP client. This option only works when the server is behind a NAT, and with the FTP clients residing in a different subnet as the server. In most cases you don't need to enable this option, but if the FTP clients fail to connect to the server, then please try with this option enabled.

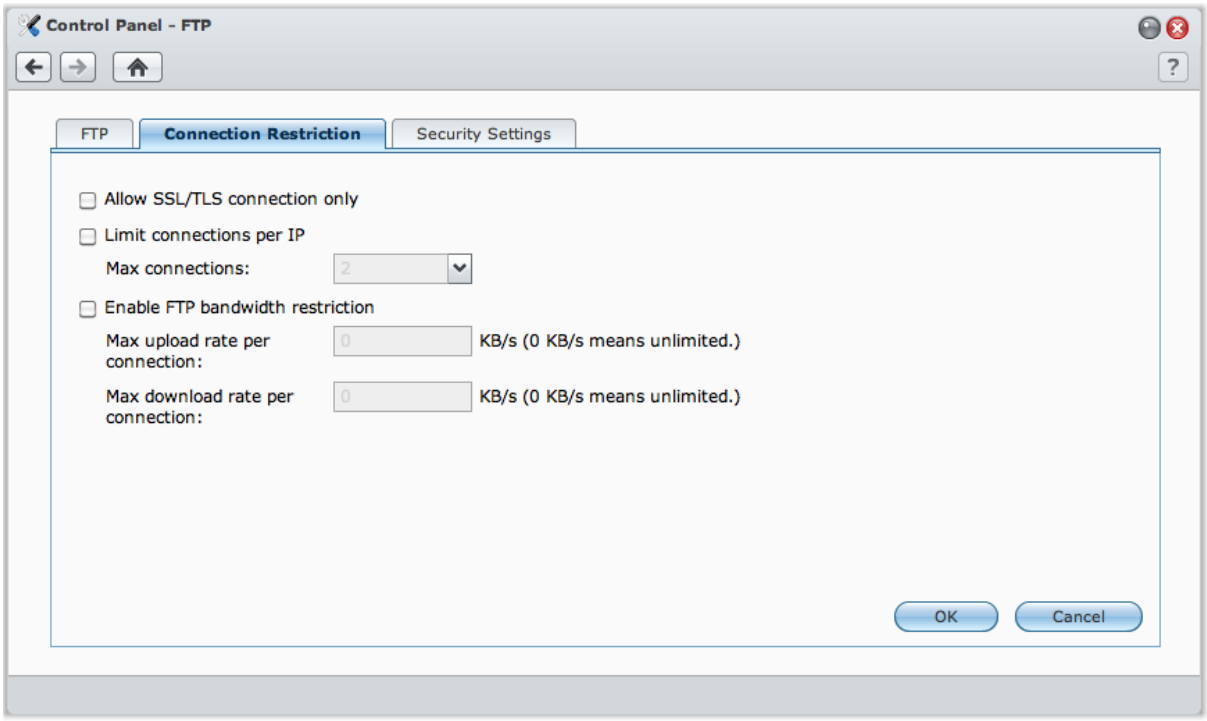
Enable UTF-8 filename support
If FTP client supports UTF-8, enable this function to better handle multilingual filename. However, the support to the old version of FTP clients is limited. If your FTP client has trouble to handle multilingual file name, you might want to disable this function.

Enable FTP file transfer log
Enable this function to record the log of each downloaded or uploaded file.

To see the FTP file transfer log:
Go to **Main Menu** > **System Information** > **Log**, and choose **FTP file transfer log** from the drop-down menu. Enabling FTP file transfer log will affect the system performance.

Set up FTP Connection Restriction

Click the **Connection Restriction** tab to limit DiskStation users' FTP access to DiskStation.

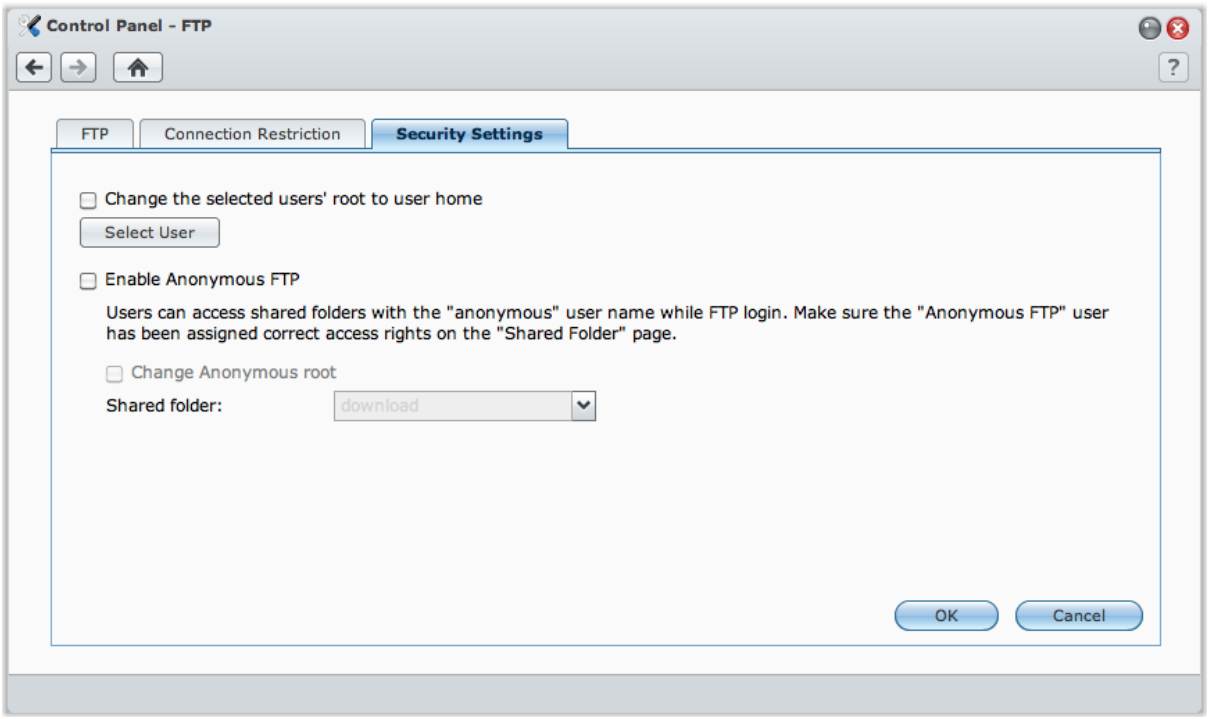


To set up FTP connection restriction, tick any of the following and click OK:

- **Allow SSL/TLS connection only**: Accept only SSL or TLS connection requests from FTP clients.
- **Limit connections per IP**: Limit the maximum connections per IP.
- **Enable FTP bandwidth restriction**: Restrict the bandwidth of single FTP connection.

Manage FTP Security Settings

Click the **Security Settings** tab o enhance FTP security.



To manage FTP security settings, tick any of the following and click OK:

- **Change the selected users' root to user home**: Click **Select User** to restrict the selected users' FTP access to their home folders only.
- **Enable Anonymous FTP**: Allow anyone to log in to DiskStation's FTP service (with the **anonymous** or **ftp** account). You can also tick **Change Anonymous root** and select a shared folder to restrict anonymous users' FTP access to that folder only.

More Information

To configure the privilege of anonymous user:

1 Go to **Main Menu** > **Control Panel** > **Shared Folder**, select a shared folder, and click **Privileges Setup**.

2 Choose **System internal user** from the drop-down menu and tick the checkboxes.

3 Click **OK**.

Connect to Synology DiskStation Using a FTP Application

Open any FTP application on your computer and enter the following information to connect to Synology DiskStation:

- Synology DiskStation's IP address or domain name
- Your user account and password
- The port number (The default number is 21)

Access Files via File Browser

File Browser is DSM's file management tool, allowing DSM users over the Internet to access DiskStation folders with their web browsers. By launching two or more File Browsers, you can manage all your DiskStation data by dragging and dropping them between different File Browsers.

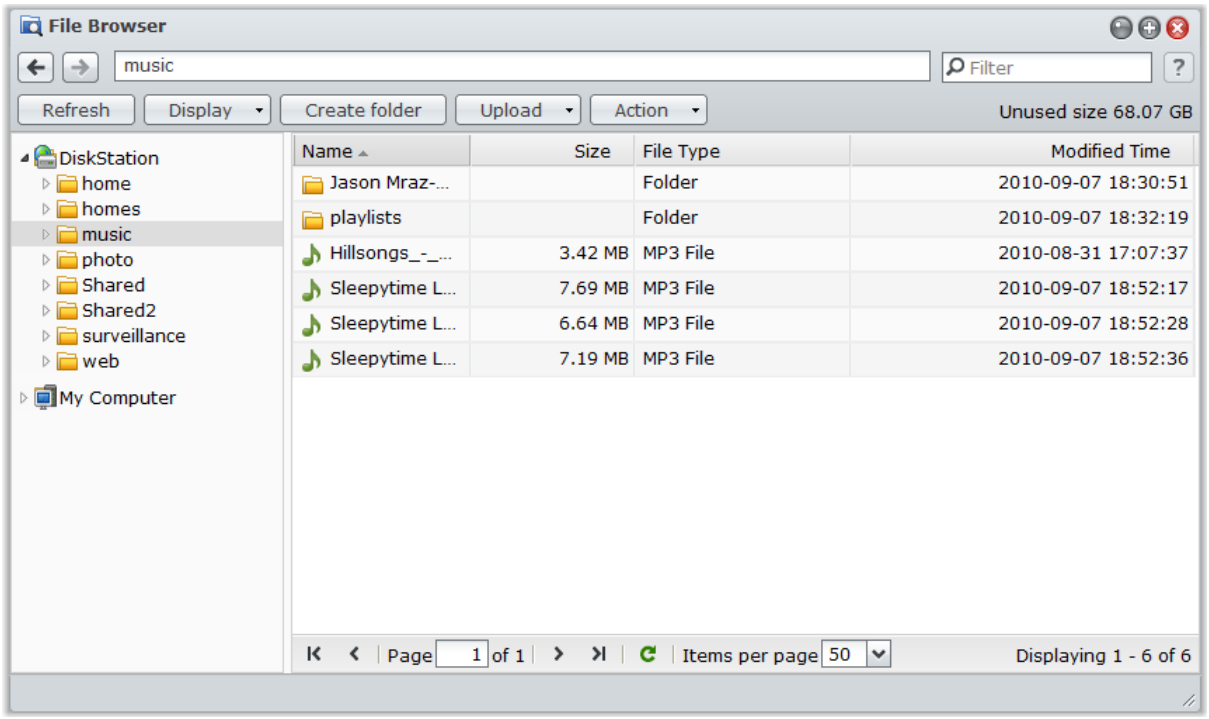
File Browser Requirement

To use the full featured File Browser, you will need the newest web browser, Java and Flash Player.

- **Browser:** Chrome 5 or later, Firefox 3.5 or later, Safari 4.0 or later, Internet Explorer 7 or later; with AJAX and JavaScript enabled
- **Java (For browsing folders on the local computer):** Java Runtime Environment (JRE) 5 or later
- **Flash:** Flash Player 9.0.28 or later

File Browser Appearance

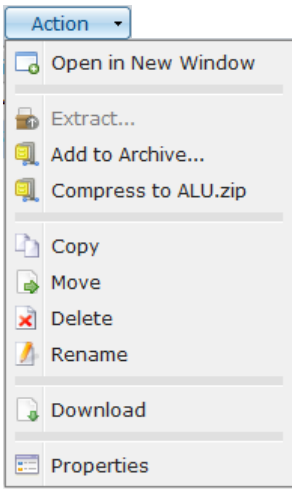
Go to **Main Menu** > **File Browser** to open a **File Browser** window.



- **Left panel:** Displays Synology DiskStation's shared folders and their subfolders in the upper part, and the folders on your local computer in the lower part.
- **Main section:** Displays contents of the currently-selected folder.
- **Help button (top-right corner):** Click the **Help** button (with a question mark) to reveal the DSM Help, where you can get useful help about how to use File Browser.

Set File Browser in Action

With clicking the **Action** menu and dragging-and-dropping, you can easily download, copy, move, rename, delete, extract, and compress files or folders, and more.



Download Files or Folders from Synology DiskStation

Use any of the following methods to download files or folders from Synology DiskStation to your computer.

Method 1:

1 Select the files or folders you want to download. (Press and hold Shift or Ctrl while making multiple selections.)

2 Choose **Download** from the **Action** menu.

Method 2:

1 Select the files or folders you want to download. (Press and hold Shift or Ctrl while making multiple selections.)

2 Right-click the files or folders, and choose **Download**.

Note:

- Under Windows environment, characters **\ * ? " > | # %** contained in the filename will be replaced by **-** after downloading.
- If you make multiple selections, File Browser will archive your selections into a zip file before downloading.

Upload Files or Folders to Synology DiskStation

Use any of the following methods to upload files or folders from your computer to Synology DiskStation.

Method 1:

1 From the upper part of the left panel, choose a destination folder on Synology DiskStation.

2 Choose **Upload**, and select files or folders from your local computer.

3 Click **OK** to start uploading.

Method 2:

1 From the lower part of the left panel, select a folder on your local computer. The main section now displays the contents of the selected folder.

2 Select the files or folders you want in the main section, and then click **Upload**.

3 Select a destination folder on DiskStation in the window that appears.

4 At the top-right corner of the window, select **Overwrite** if you want to overwrite files or folders with the same name in the destination folder. Otherwise, select **Skip**.

5 Click **OK** to start uploading.

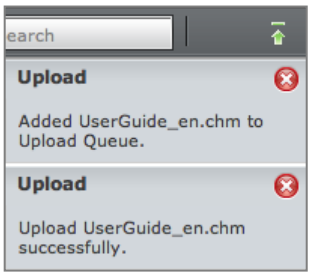
Method 3:

1 On the left panel, drag a folder from your computer (the lower part) to any folder on the DiskStation (the upper part).

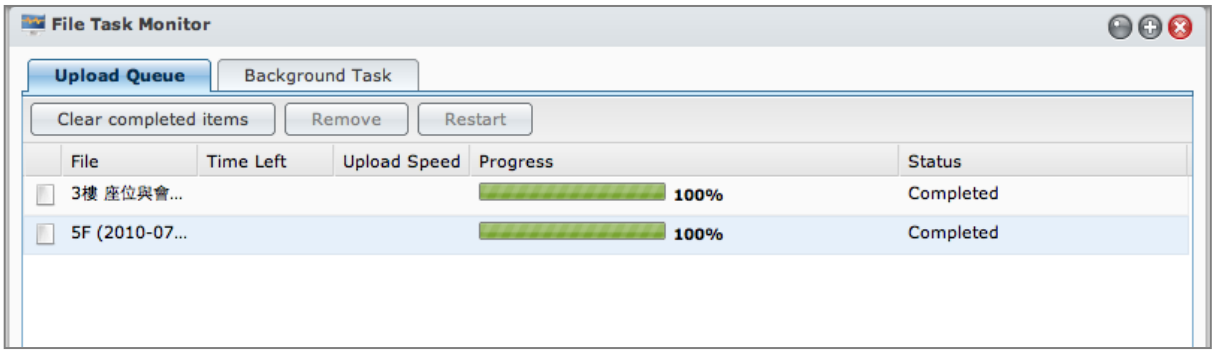
2 In the pop-up menu that appears, choose **Upload - Overwrite** to overwrite files or folders with the same name in the destination folder. Otherwise, choose **Upload - Skip** to skip the files with the same filename.

> ***Note:*** If you have installed JRE 5 or later, you can upload files with size over 4GB. Otherwise, you can only upload up to 2GB of contents at a time.

When you upload files and folders using any of the following methods, you can see the uploading progress of the files and folders in the top-right corner of the desktop.

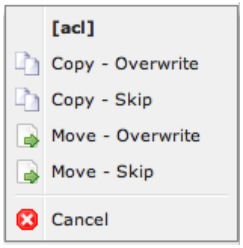


You can also click the upward arrow at the right end of the taskbar to see the **Upload Queue**.



Copy or Move Files or Folders on Synology DiskStation

Use any of the following methods to copy files or folders between folders on Synology DiskStation.



Method 1:

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Choose **Copy** or **Move** from the **Action** menu.

3 Select a destination folder on Synology DiskStation in the window that appears.

4 At the bottom of the window, select **Overwrite** if you want to overwrite files or folders with the same name in the destination folder. Otherwise, select **Skip**.

Method 2:

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Drag any DiskStation folders or files from the main section to another DiskStation folder on the left panel.

3 In the pop-up menu that appears, choose **Copy - Overwrite** or **Move - Overwrite** to overwrite files or folders with the same name in the destination folder. Otherwise, choose **Copy - Skip** or **Move - Skip** to skip the files with the same filename.

Method 3:

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Go to **Main Menu** > **File Browser** to open a new File Browser window, and use the left panel to browse to a destination folder on Synology DiskStation.

3 Drag any DiskStation folders or files from the original File Browser window to the window you just opened.

4 In the pop-up menu that appears, choose **Copy - Overwrite** or **Move - Overwrite** to overwrite files or folders with the same name in the destination folder. Otherwise, choose **Copy - Skip** or **Move - Skip** to skip the files with the same filename.

Note: When copying or moving files/folders to a directory in FAT file system, characters **\ *?">|** in the filename will be replaced by **–**, and the Metadata of Mac files will be deleted.

Rename a File or Folder on Synology DiskStation

1 Select a file or a folder.

2 Do one of the following:

- Choose **Rename** from the **Action** menu.
- Right-click the file or folder and choose **Rename**.

3 Enter a new name in the window that appears and click **OK**.

Create a Folder

1 Go to the directory where you want to create a folder.

2 Do any of the following:

- Click **Create folder**.
- Choose **Create folder** from the **Action** menu.

3 Enter a new name in the window that appears and click **OK**.

Delete Files or Folders

1 Select the files or folders you want. (Press and hold Shift or Ctrl while making multiple selections.)

2 Do one of the following:

- Choose **Delete** from the **Action** menu.
- Right-click one of the files or folders and choose **Delete**.

Extract an Archive

1 Select an archive you want to extract.

2 Choose **Extract** from the **Action** menu. You can see the contents of the archive in the **File list**.

3 Click the **Option** tab to enter the password if the archive is password-protected.

4 Click **Destination** at the bottom, and select a destination folder on Synology DiskStation in the window that appears.

5 Do one of the following:

- To extract all files and folders in the archive, click **Extract All**.
- To extract some files or folders in the archive, select them in the **File list** and click **Extract Selected**.

Note: File Browser can extract the following archive formats: .zip, .tar, .gz, .tgz, .rar, .7z, .iso (ISO 9660 + joliet)

Compress Files or Folders

1 In the main section, select the files or folders on Synology DiskStation that you want to compress. (Press and hold Shift or Ctrl while making multiple selections.)

2 Do one of the following:

- Choose **Compress to "(file name)".zip** from the **Action** menu.
- Right-click one of the selections and choose **Compress to "(file name)".zip**.
- To use advanced options (such as renaming or encrypting the archive, using different compression levels or modes), choose **Add to archive** instead.

Note:

- You cannot compress files or folders on your local computer using File Browser.
- Supported archive formats: .zip.

Open a File in a New Window

Open a file on Synology DiskStation in a new tab or window of the web browser to preview it instantly.

To open a file in a new window:

1 Select the file you want to preview.

2 Do one of the following:

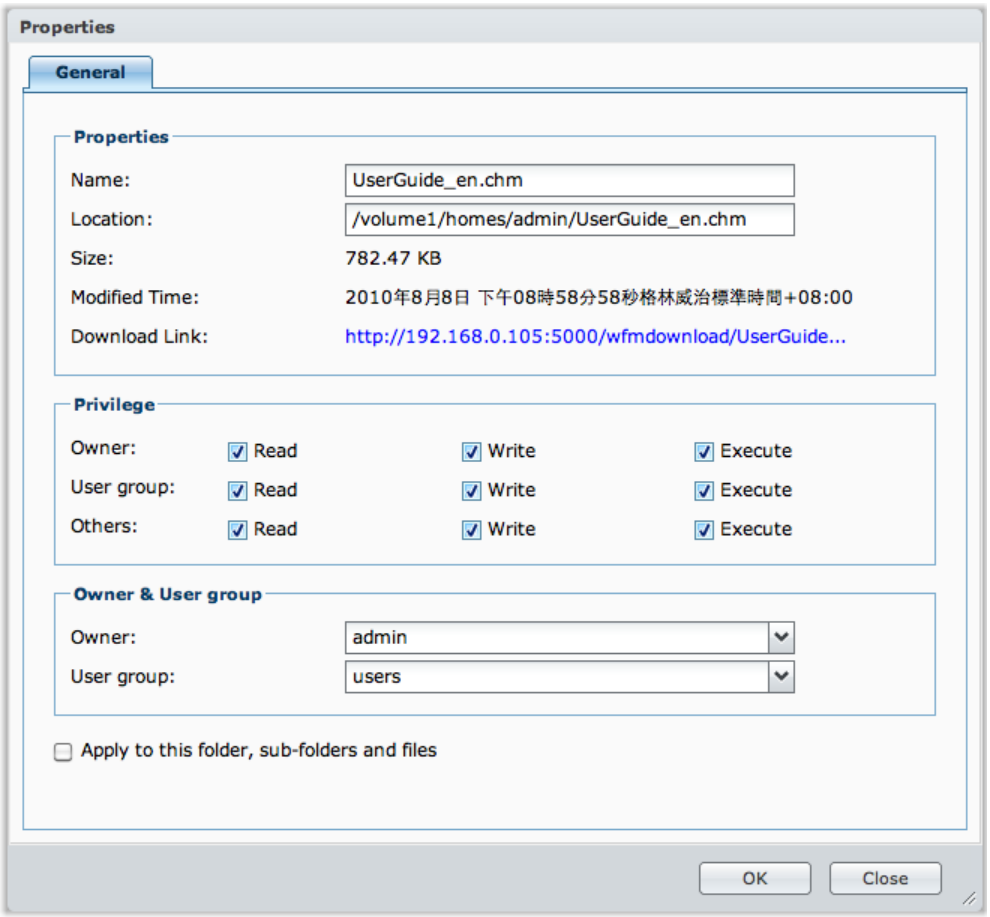
- Choose **Open in New Window** from the **Action** menu.
- Right-click the file and choose **Open in New Window**.

If your browser can view the selected file, it will be opened in a new browser window.

Note: The browser setting will decide what file types can be viewed directly.

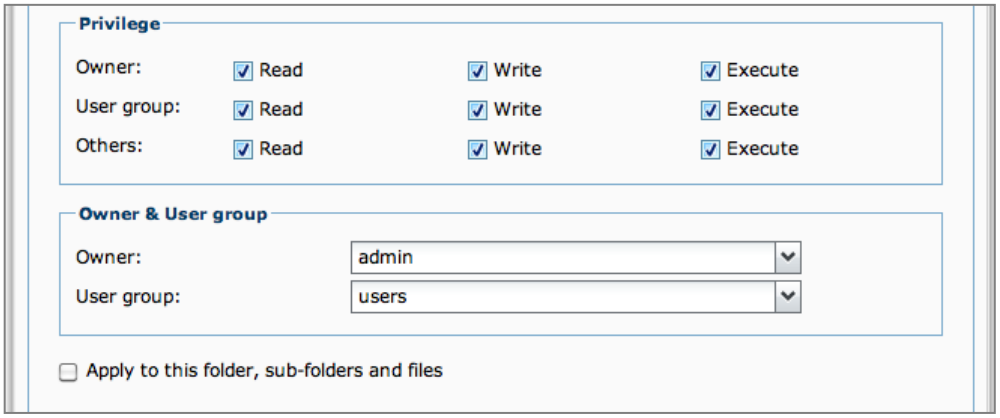
Edit the Properties of Files and Subfolders

You can edit the access privileges to files and subfolders (meaning folders and their subfolders in a shared folder), copy download links and open file in a new browser window in the **Properties** window.



Allow Users and Groups to Access Files and Subfolders

With File Browser, you can set access privileges to files and subfolders. This function is especially useful when you want to allow different groups of users to access different subfolders in a shared folder.



Note: To set access privileges to shared folders, use Synology DiskStation Manager instead. See "Allow Users or Groups to Access Shared Folders" on Page 72 for more information.

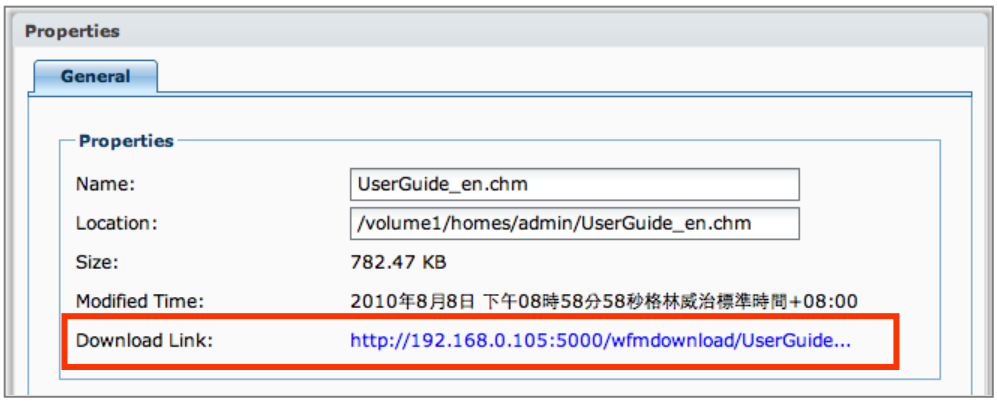
To allow users and groups to access files and subfolders:

1. Select the files and folders for which you want to set access privileges. (Press and hold Shift or Ctrl while making multiple selections.)
2. Do one of the following to open the **Properties** window:
   - Choose **Properties** from the **Action** menu.
   - Right-click one of the files or folders and choose **Properties**.
3. In the **Owner & User Group** section, do the following:
   - Choose the owner of the selected files and folders from the **Owner** drop-down menu.
   - Choose the user group of the selected files and folders from the **User group** drop-down menu.
   - All the other users or groups not chosen here belong to the **Others** group.
4. In the **Privilege** section, allow or disallow **Owner**, **User group**, and **Others** to access the selected files and folders by ticking any of the **Read**, **Write** and **Execute** checkboxes.
5. Tick **Apply to this folder, sub-folders and files** if you want to give the same access privileges to all the subfolders and files within the selected subfolders.
6. Click **OK**.

Note: You are not allowed to edit the access privileges to files and subfolders in the **photo** shared folder here. To set access privileges to photo albums for Photo Station users, see "Set as Private Album" on Page 111 for more information.

Obtain a File or Folder's Download Link

You can obtain the download link to a file or folder and share the link with other users.



To obtain a file or folder's download link:

1 Select the file or folder for which you want to obtain its download link.

2 Do one of the following to open the **Properties** window:

- Choose **Properties** from the **Action** menu.
- Right-click the file or folder and choose **Properties**.

3 Right-click the download link, and choose the pertinent function from the shortcut menu to copy the download link. The name of the function may vary depending on the web browser you are using.

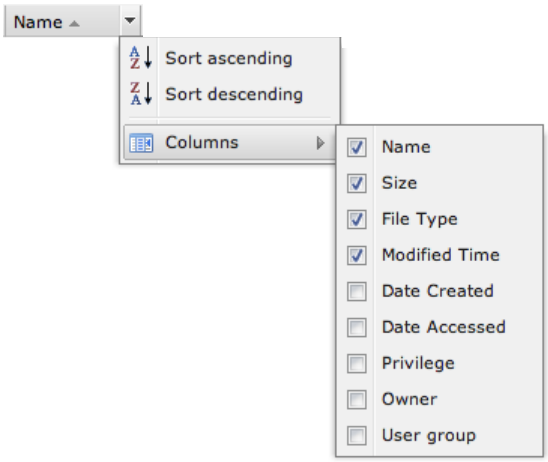
4 Send the link to other users via Email or instant messages. They can download the linked file or folder by entering their username and password.

Note:

- To download a file or folder with the download link, valid DiskStation username and password are required.
- With File Browser, you can only perform the upload action for files and folders on your computer. All the other File Browser actions and properties setting are available for files and folders on Synology DiskStation only.

Display Additional Attributes

You can display additional attributes of files or folders to show them in new columns of the main section.



To display additional attributes:

1 Hover your mouse to any column header and click the downward triangle that appears on the right.

2 From the drop-down menu that appears, choose the **Columns** submenu.

3 Tick the checkboxes next to the extra attributes to show them in new columns.

Access Files via File Station

Go to **Main Menu** > **Control Panel** > **File Station** to enable File Station, which allows you to access DiskStation files through a customized port.

To enable File Station:

1 Tick **Enable File Station (HTTP)** and specify a customized port number.

2 If you want to have the connection to File Station encrypted via the SSL/TLS encrypting mechanism, tick **Enable File Station (HTTPS)** and specify a customized port number.

3 If you want to activate the mini banner to save vertical space, tick **Use mini banner**.

4 If you want to record the activities of all users, tick **Enable File Station log**.

5 Click **OK**.

To see the File Station log:

Go to **Main Menu** > **System Information** > **Log**, and choose **File Station log** from the drop-down menu. The user activities are shown under the **Event** column, including **Upload**, **Download**, **Delete**, **Rename**, **Move**, **Copy** and **Property set**.

To customize File Station:

1. Under **Customization**, do any of the following:
2. Customize the login message in the **Message** field.
3. Change the banner color in the **Change banner color** field.
4. Click the button next to **Upload banner image** to upload your favorite banner image.
5. Click **OK**.

To launch File Station, do any of the following:

- Click the link next to **Login at**.
- Go to **Main Menu** and click **File Station**.
- Type Synology DiskStation's IP address or server name or domain name plus a colon and the customized port number (e.g. http://ericawang.dyndns.org:7000) in the address bar of your web browser. Press Enter (PC) or Return (Mac) on your keyboard.

Chapter 9

Back Up Data

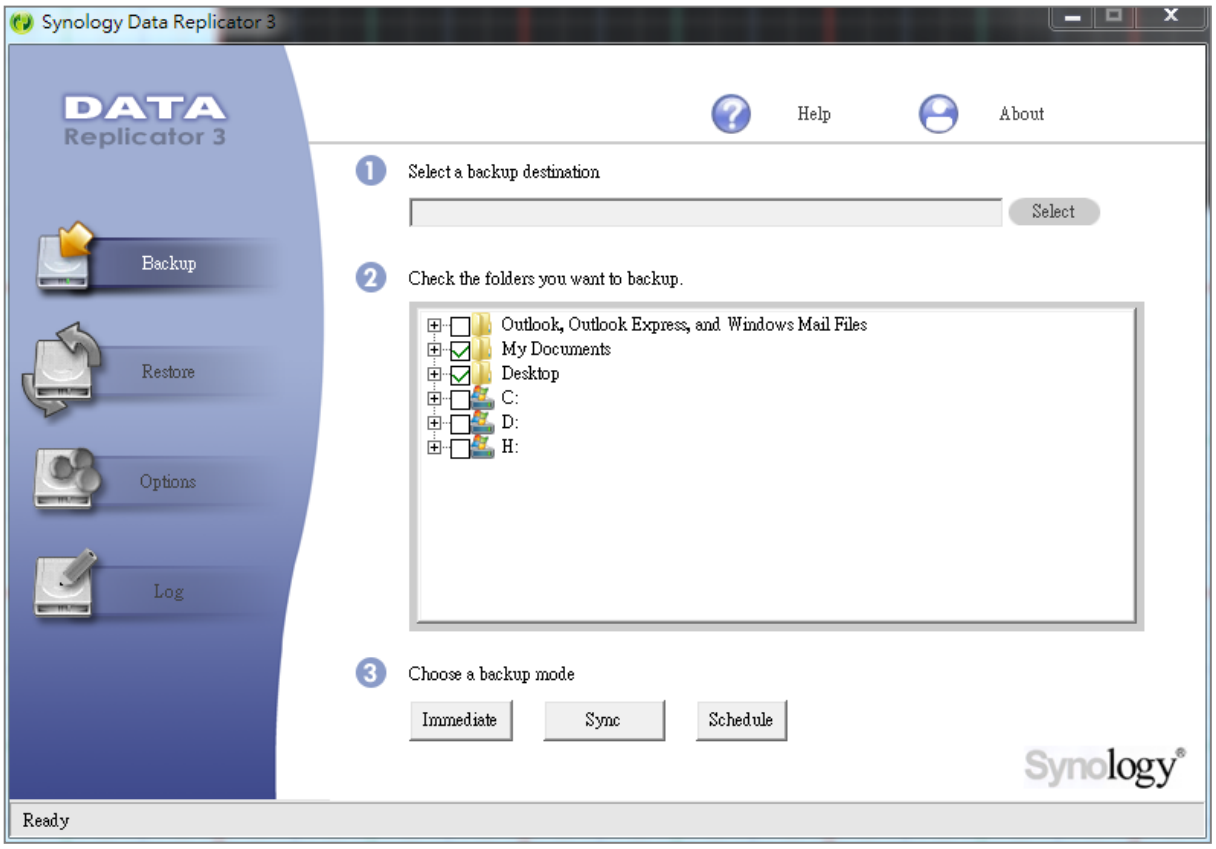
Synology offers comprehensive backup solutions for your computer and Synology DiskStation. You can back up data on your computer to Synology DiskStation. You can also back up DiskStation data with local or network backup. The creative USBCopy simplifies USB storage backup with a one-touch design. The support for the Amazon S3 backup service and the innovative Time Backup package give you other choices for server backup.

Back Up Computer Data

Synology-designed Data Replicator 3 allows you to back up data from a Windows computer to Synology DiskStation. If you are using a Mac or Linux, Synology DiskStation can also serve as their backup destination.

Use Data Replicator for Windows

The Synology Data Replicator installation package can be found on the Installation CD and Synology's Download Center at: http://www.synology.com/support/download.php



What Can Data Replicator Do?

- Monitor specific folders on your Windows computer and perform real-time backup when any modification to the contents within a monitored folder is made.
- Adjust backup versions and restore points.
- Restore backup data from Synology DiskStation to your Windows computer according to your preference.

Important:

- Your computer and Synology DiskStation should use the same encoding. See "Specify Default Languages" on Page 29 for more information.
- Synology Data Replicator 3 is the next generation of Synology Data Replicator. It can only restore the data on Synology DiskStation that was backed up after Data Replicator 3 was installed. If users have backed up data on Synology DiskStation using Synology Data Replicator, we recommend restoring data on Synology DiskStation to PC first before using Synology Data Replicator 3.

Data Replicator Requirement

- **Free HDD Space:** 5MB
- **Operating System:** Windows 2000 or later
- **Best Screen Resolution:** 1024 x 768 or above
- **Network Environment:** Microsoft Networking over TCP/IP enabled and has network connection with Synology DiskStation

Install Data Replicator

1 Insert the Installation CD into the optical drive of your computer.

2 Click **Data Replicator 3**, and follow the onscreen instructions to finish installation.

Use Data Replicator

For detailed instructions on how to use Data Replicator, see its Help by clicking the **Help** button.

Use Time Machine for Mac

Synology DiskStation provides compatibility for backup with Apple Time Machine. Mac users can back up their data to Synology DiskStation's shared folder without problem.

To set Synology DiskStation as Time Machine's backup destination:

1 Go to **Main Menu** > **Control Panel** > **Win/Mac/NFS** and tick **Enable Mac file service**.

2 Choose a shared folder from the **Time Machine** drop-down menu. The chosen shared folder will become Time Machine's backup destination.

> ***Note:*** For more information about using Time Machine, see the help on your Mac computer.

Use rsync for Linux

You can use rsync to back up Linux data to Synology DiskStation.

Back Up Data on Synology DiskStation

Other than backing up computer data to Synology DiskStation, you can back up the data in your shared folder or even the subfolders on your Synology DiskStation.

Ways to Back Up Synology DiskStation Data

Local Backup and Network Backup are ways you can choose to back up data on your Synology DiskStation. Plus, Synology DiskStation also supports Amazon S3 Backup, allowing you to back up data to the Amazon S3 Server.

Local Backup

Local Backup allows you to back up data to the **LocalBackup** folder in the following locations on your Synology DiskStation:

- Another shared folder
- An external USB or eSATA Disk attached to your Synology DiskStation

> ***Note:*** You may need to format the external disk before performing Local Backup to the disk for the first time.

Network Backup

Network Backup allows you to back up data to the **NetBackup** folder in the following locations within the Intranet or over the Internet:

- Another Synology DiskStation
- A rsync-compatible server

About Network Backup encryption:

- **Non-encrypted**: Back up without data encryption. It provides better performance.
- **Encrypted**: Back up with data encryption. It can protect your data with higher security.

> ***Note:*** To ensure backup efficiency, it is recommended that you choose encrypted mode for important files only.

About backup modes for backing up to rsync-compatible server:

- The **rsync daemon mode** is used when you select a backup module (shared folder on the rsync-compatible server) from the drop-down menu next to **Backup module**.
- The **remote shell mode** will be enabled only when you enter an absolute path (starting with "/") in **Backup module**.

> ***Note:*** Remote shell mode only supports encrypted backup.

Amazon S3 Backup

Amazon Simple Storage Service (S3) Backup allows you to back up data to the Amazon S3 server.

After you perform an Amazon S3 Backup task, a single backup file will be stored in a **Bucket** on Amazon S3 Server, which is identified by a unique **Set KEY Value** that begins with **SourceServerName_MAC address**, and ends with the complete file path of this file.

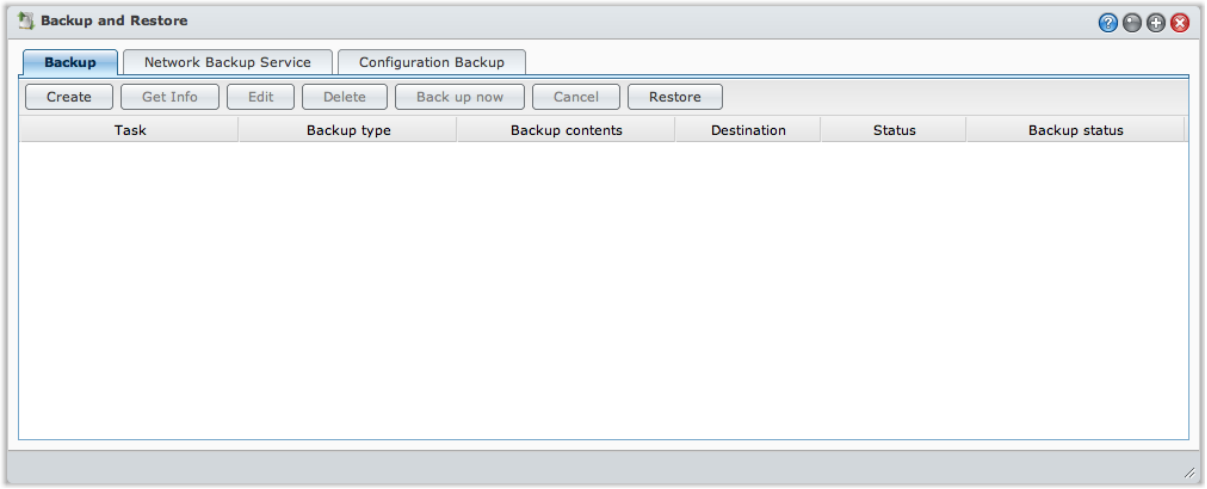
For more information about Amazon S3 Backup, visit its website at: **http://aws.amazon.com/s3/**

Note:

- There are also encrypted and non-encrypted modes for Amazon S3 Backup. See "Network Backup" on Page 94 for more information.
- Fees may apply to use the Amazon S3 Backup service.
- For more information about backing up DiskStation data, go to **Main Menu** > **Backup and Restore** and click the **Help** button (with a question mark) at the top-right corner.

Perform Backup Tasks on Synology DiskStation

Go to **Main Menu** > **Backup and Restore** to perform backup tasks on Synology DiskStation.

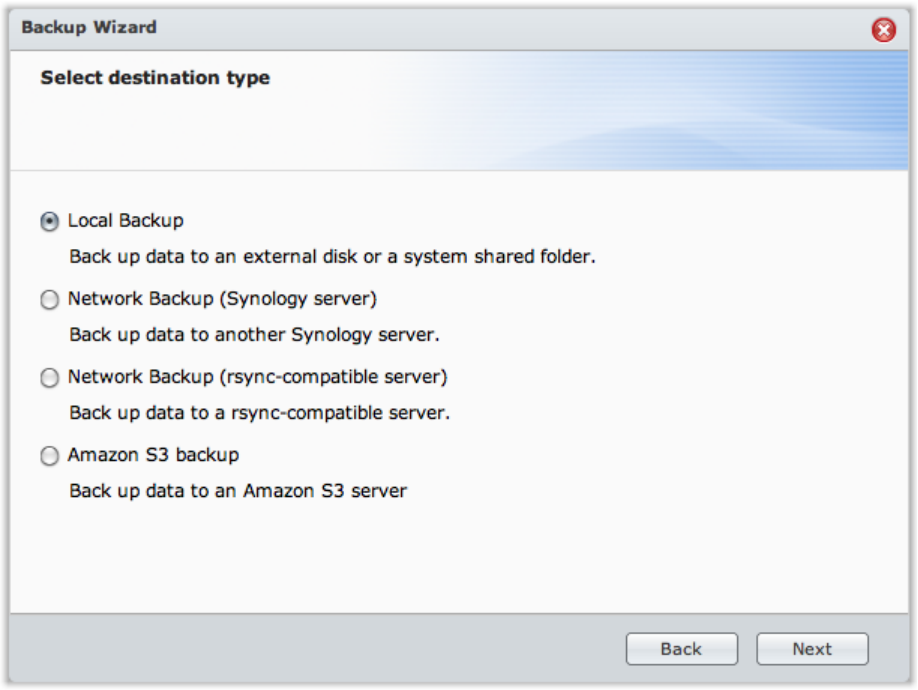


Before you start, do the following first:

- **For Network Backup to another Synology DiskStation:** Log in to the target Synology DiskStation, click the **Network Backup Service** tab and make sure **Enable network backup service** is ticked to make the target DiskStation available for backup.
- **For Local Backup to external disks:** Go to **Main Menu** > **Control Panel** > **External Devices** and click **Format** to format the external disk.

Create a Backup Task

Click **Create** and follow the wizard to complete the setup.



Edit a Backup Task

1 Select the backup task you want to edit.

2 Click **Edit** and modify settings.

3 Click **OK**.

Delete a Backup Task

1 Select the backup task you want to remove. (Press and hold Shift or Ctrl while making multiple selections.)

2 Click **Delete**.

Perform Immediate Backup

You can perform an immediate backup for a backup task at any time.

To perform immediate backup:

1 Select the backup task you want to back up. (Press and hold Shift or Ctrl while making multiple selections.)

2 Click **Back up now**.

Cancel a Backup Task

You can cancel backup tasks in progress or in waiting list.

To cancel a backup task:

1 Select the backup task to you want to cancel. (Press and hold Shift or Ctrl while making multiple selections.)

2 Click **Cancel**.

Restore Backup Data

Click **Restore** and follow the wizard to complete the setup.

Back Up System Configuration

Go to **Main Menu** > **Backup and Restore** > **Configuration Backup** to back up and restore the settings of your Synology DiskStation, including users, groups, and shared folders.

To back up system configuration:

1 Choose **Back up system configuration**.

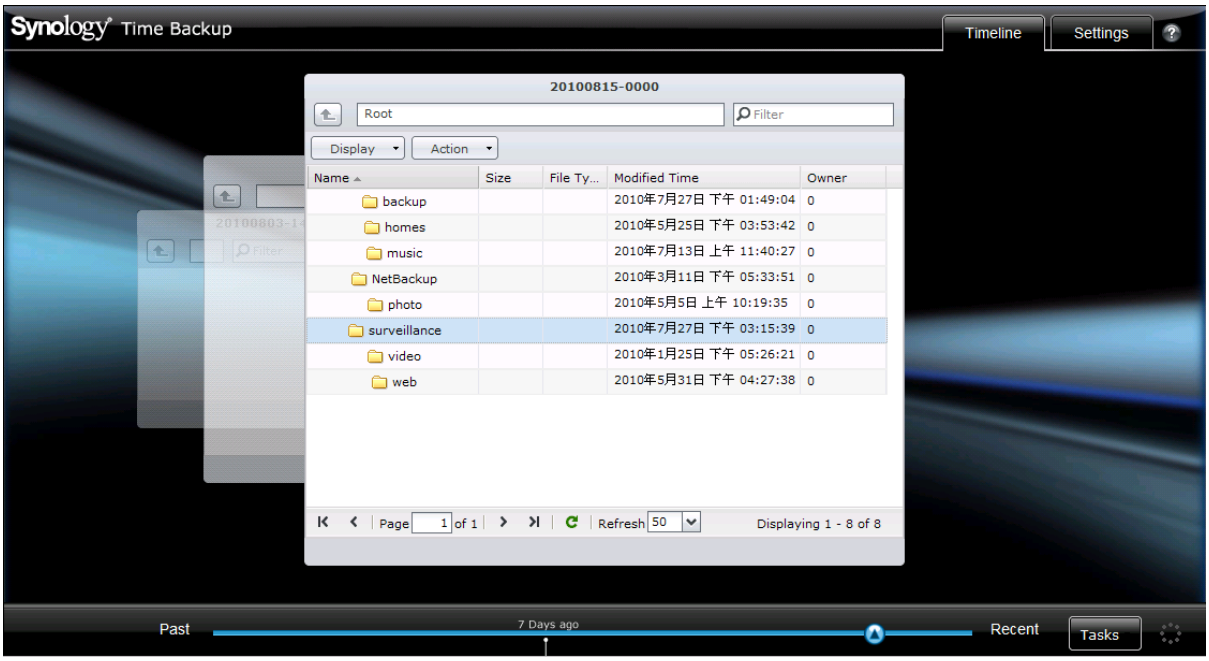
2 Save the configuration file (named **configuration.dss**) to your computer.

> ***Note:*** When you perform network backup, the settings of your Synology DiskStation, including users, groups, and shared folders will also be backed up. You can choose to recover these settings when you restore the backup data.

Backup DiskStation Data with Time Backup

Synology Time Backup is a quick and flexible way to backup and restore shared folders on DiskStation. You can back up the data locally onto another volume, or onto an external hard disk. You can set up multiple **tasks** and create more than one **version** for each task.

Time Backup features snapshot function. When creating a version, the system will take a **snapshot** and capture the condition of the data within the specified moment. The system will create a version entry within seconds. You can access the newly created version and edit the files you've just backed up with no time delay.



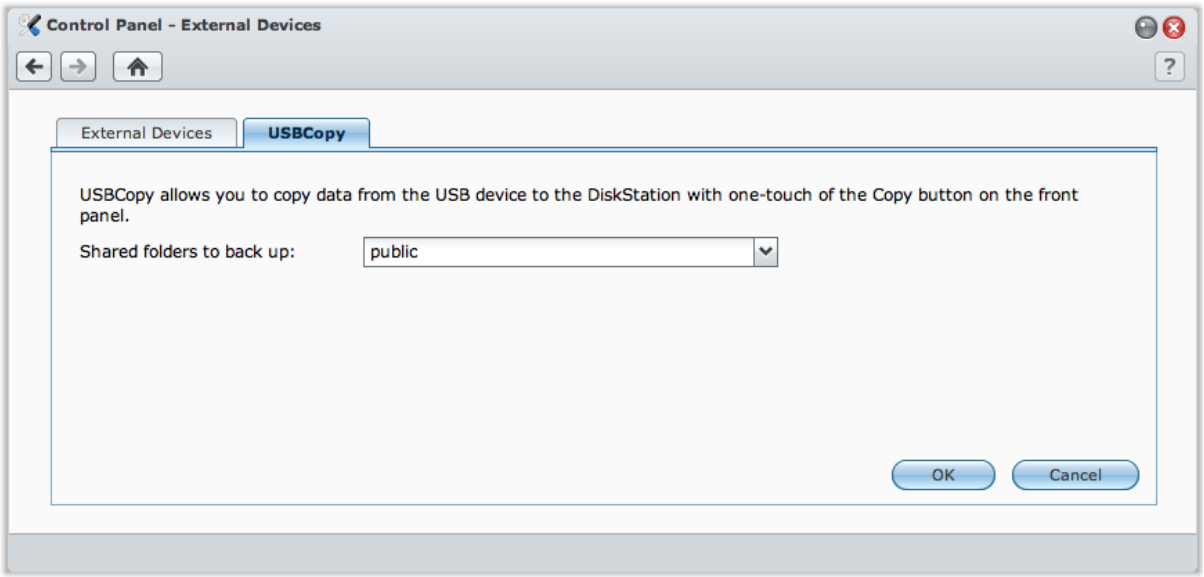
The Time Backup package is available at Synology's **Download Center**. To learn more about how to use Time Backup, see its help by clicking the **Help** button (with a question mark) at the top-right corner.

> ***Note:*** For more information about installing packages for Synology DiskStation Manager, see "Manage Packages" on Page 166.

Use USBCopy to Back Up Data on USB Device

You can copy data from a USB device to a shared folder on your Synology DiskStation using the USBCopy button.[1]

Go to **Main Menu** > **Control Panel** > **External Devices** > **USBCopy** and specify a shared folder from the drop-down menu. All data on your USB device will be copied to the specified shared folder when you perform USBCopy.



To perform USBCopy:

1 Connect the USB device to the USB port of your Synology DiskStation.

2 Press the **USBCopy** button (with the letter **C**) on the front panel of your Synology DiskStation.

Note:

- Only USB devices in FAT or NTFS format are supported.
- USB devices must be plugged into the USB port on the front panel of Synology DiskStation.
- The available space of the destination shared folder must be larger than the used space of the USB device.

[1] USBCopy is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

Chapter 10

Host Websites, Email Server, and Print Server

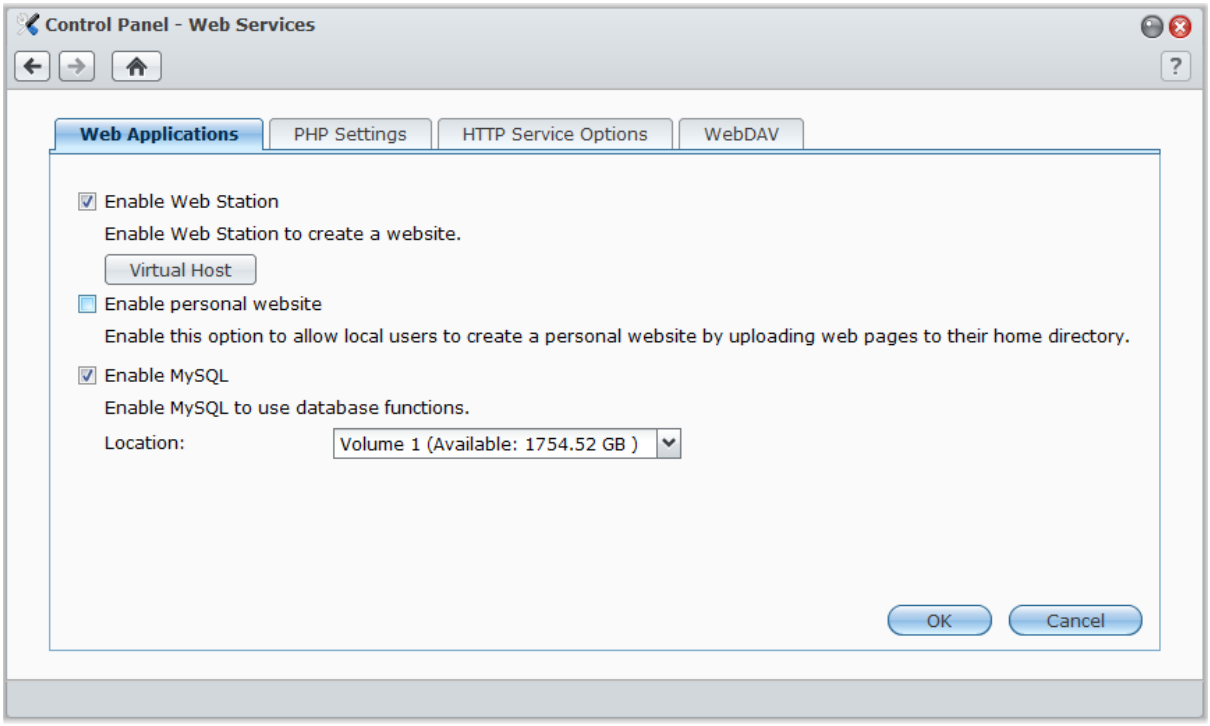
Synology DiskStation is especially designed for small and medium businesses (SMB), providing them with the ability to set up web, email, and printer servers on a single Synology DiskStation without spending extra money.

Use Web Station to Host Websites

Go to **Main Menu** > **Control Panel** > **Web Services** to set up your website with Web Station, which is integrated with support for PHP and MySQL.

Enable Web Station

When Web Station is enabled, the **web** shared folder will be created automatically. Save your web page content in the folder to publish it on your website.



To enable Web Station:

1 Tick **Enable Web Station**.

2 Click **OK**.

Web Station support and limitations include:

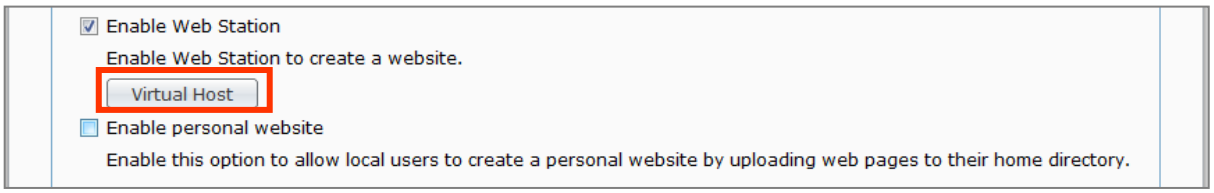
- The homepage for your website must be named **index.htm**, **index.html**, or **index.php**.
- PHP 5.3.2 is supported.
- The following functions are not supported by PHP: system(), exec().
- When you use the PHP mail() function, the system will automatically retrieve and use the SMTP server information from Synology DiskStation. Make sure you have entered the correct SMTP server information.

> ***Note:*** For more information about SMTP server, see "Receive Email Notification" on Page 167.

- The real path of the **web** shared folder is **/volume1/web**. Some applications require the user to set the path in the configuration file.
- The names **blog**, **photo**, **photosrc**, and **webdefault** are reserved folder names. These names cannot be used by Web Station, so please do not create folders with these names under the **web** shared folder.
- You can customize the error page by creating any of the following files and putting them in the **web** shared folder: **missing.html**, **missing.htm**, or **missing.php**. When users try to connect to a page that does not exist, this customized error page will be displayed.

Enable Virtual Host to Host Websites

The Virtual Host support allows you to host up to 30 websites on one Synology DiskStation. Each website can have different port number or even different hostname.



To enable Virtual Host and host websites:

1 Click **Virtual Host** to open the settings window.

2 Click **Create** and enter the following information.

   a The name for the subfolder (in the **web** shared folder) that will contain the web pages to build the website

   b The hostname for the website

   c The protocol (**HTTP** or **HTTPS**) for the website

   d The port number for the website

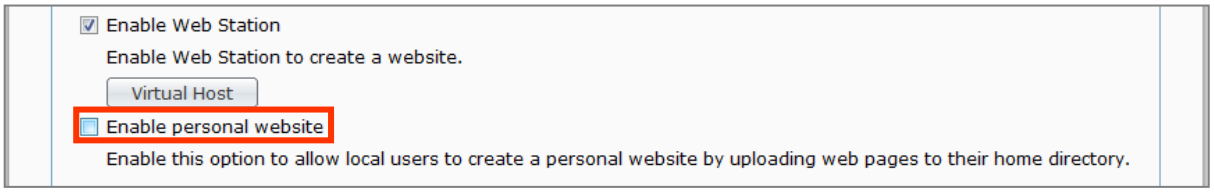
> ***Note:*** To use HTTPS protocol, HTTPS connection needs to be enabled in advance. See "Modify HTTP Service Options" on Page 53 for more information.

3 Click **OK**.

4 Click **Virtual Host** and go through the above steps again if you want to set up more websites.

Enable Personal Website

The personal website function is a convenient way to allow Synology DiskStation users to host their own personal website. Each user will have a unique website address **http://Synology_Server_IP/~username** or **http://Synology_Server_Name/~username**.



> ***Note:*** Before enabling personal website, make sure **User Home** is enabled. See "Create User's Home Folder" on Page 66 for more information.

To create a personal website:

1 Tick **Enable personal website** and click **OK**.

2 Create a **www** folder in the user's home folder.

3 Upload web pages to the **www** folder.

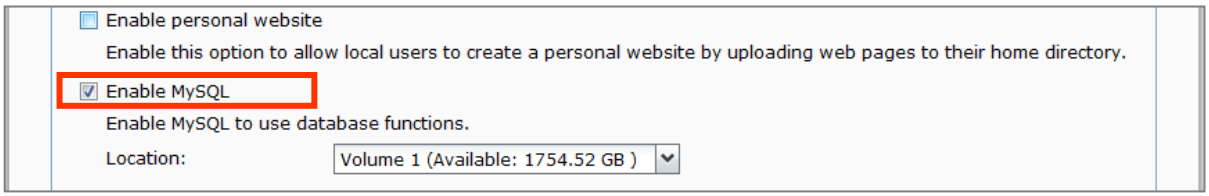
Personal website Support and limitations:

- Local users are only allowed to access the data in the following path:
  - Their own **home** folder
  - /var/tmp
  - /tmp

  - /volume1/@tmp/php
- Synology DiskStation users can customize the error page by creating any of the following files and putting them in the **www** shared folder: **missing.html**, **missing.htm**, or **missing.php**. When users try to connect to a page that does not exist, this customized error page will be displayed.

Enable MySQL

You can enable MySQL to use the MySQL database function for your website. After MySQL is enabled, you can install the **phpMyAdmin** package available at Synology's **Download Center** to manage the MySQL database.



To Enable MySQL:

Tick **Enable MySQL** and choose a volume to store the database data.

Note:

- For more information about installing packages for Synology DiskStation Manager, see "Manage Packages" on Page 166.
- By default, the ID for the phpMyAdmin administrator is **root**, and the password is blank. It is recommended that you change the password.
- You can go to **Main Menu** > **Control Panel** > **Restore Defaults** to delete your MySQL databases. See "Restore Synology DiskStation to Factory Defaults" on Page 169 for more information.

Manage PHP Settings

After you have enabled Web Station, you can click the **PHP Settings** tab to configure PHP related settings.

To turn on PHP configuration option register_globals:

1 Tick **Turn on PHP configuration option register_globals** if the PHP application you use requires the register_globals option to be turned on.

2 Click **OK**.

Important: it is recommended that you turn off the register_globals option for security reasons.

To enable PHP cache:

1 Tick **Enable PHP cache** if you wish to enhance the PHP performance. However it may not take effect under some circumstances.

2 Click **OK**.

To customize PHP open_basedir:

1 Tick **Customize PHP open_basedir** if you wish to customize your own open_basedir.

2 Type the customized path in the text field. Use "**:**" to separate between each path. For example: /etc:/tmp:/usr/bin/php

3 Click **OK**.

If you want to use the system default setting, uncheck the **Customize PHP open_basedir** and click **OK**.

To select PHP extension:

1 Click **Select PHP extension** to customize your own PHP extension.

2 In the pop-up dialog **PHP extension List**, select which extension you want to enable.

3 You can also click **Default** at top of the dialog to return to default settings.

4 Click **OK**.

More Information

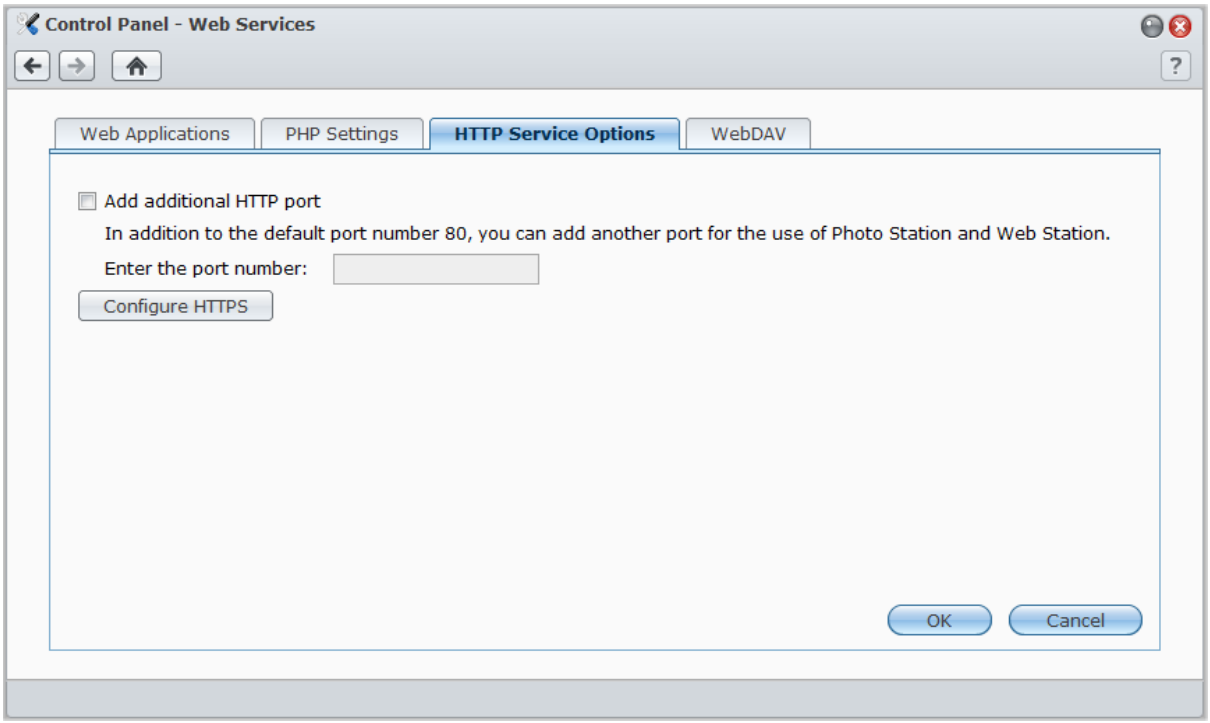
Install Featured Applications

After you have finished setting up your web environment, you can install applications to enhance the features of your website using many of the free Open Source applications.

For a list of featured applications tested to be compatible with Synology DiskStation, visit http://www.synology.com/support/faq_show.php?q_id=404. For the download links and installation instructions of those applications, visit their official websites.

Modify HTTP Service Options

Click the **HTTP Service Options** tab at **Control Panel** > **Web Services**. In addition to the default port number 80, you can add another port for the use of Photo Station and Web Station.



To configure HTTPS:

1 Click **Configure HTTPS**.

2 See "Modify HTTP Service Options" on Page 53 for more information.

To add an additional HTTP port:

1 Tick **Add additional HTTP port**.

2 Enter any port number between 1 and 65535 in the **Enter the port number** field.

3 Click **OK**.

Important: You cannot use the following port numbers for HTTP access, because they are reserved for system use.

- **Port number:** 20, 21, 22, 23, 25, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5335, 5432, 8080, 8081, 9997, 9998, 9999, 50001, 50002
- **FTP port range:** 55536-55663
- **BitTorrent port range:** 6881-6890
- **Surveillance Station port range:** 55736-55863

Manage WebDAV

Click the **WebDAV** tab at **Main Menu** > **Control Panel** > **Web Services** to enable WebDAV. By enabling WebDAV, you can manage and edit files on DiskStation remotely.

To enable WebDAV:

- For HTTP connection:
  a Tick the **Enable WebDAV** checkbox. The default port number for the WebDAV service is **5005**.
  b Click **OK**.
- For HTTPS connection:
  a Tick the **Enable WebDAV HTTPS connection** checkbox. The default port number for WebDAV HTTPS is **5006**.
  b Click **OK**.

Use WebDAV to Manage Files in Different Environments

You can use WebDAV to manage files in different environments. You can set it up as a network drive on your operating system, or access it via a browser or on a smartphone.

When using WebDAV service, we suggest you use UTF-8-supported WebDAV clients to manage your files. This can prevent the file names from becoming unreadable characters after uploading.

To use WebDAV on Windows XP/Vista:

1 Right-click on **My Computer** and select **Map Network Drive**.
2 Click **Connect to a Web site that you can use to store your documents and pictures**.
3 Click **Next**.
4 Click **Next**.
5 Enter the path for the network drive. The path should include the IP or the DDNS of your DiskStation and the port number. An example would be **http://demo.no-ip.info:5005/**.
6 Click **Next**.
7 Enter your account and password. Click **OK**.
8 Name this network drive. Click **Next**.
9 Click **Finish** to finish the settings.

> ***Note:***
> - Before you start using a WebDAV client software under Windows environment, please check if you have installed Windows patch **Web Folders (KB907306)**.
> - When using WebDAV service under Windows environment, if you want to switch to another user account, you need to log out of Windows system first.

To use WebDAV on Windows 7:

For Windows 7 users, you need to have a client software to use WebDAV. A software like this would be **Netdrive**. You can also find other client software on the Internet.

> ***Note:*** Before you start using WebDAV client software under Windows environment, please check if you have installed Windows patch **Web Folders (KB907306)**.

To use WebDAV on Mac:

1 Choose **Go** > **Connect to Server** from the menu bar.
2 Enter the **Address** field. The address should include the IP or the DDNS of your DiskStation and the port number. An example would be **http://demo.no-ip.info:5005/**.
3 Enter your user name and password.
4 Click **Connect**.

> ***Note:*** WebDAV supports Bonjour broadcast.

To use WebDAV on Ubuntu:

1 Click **Places** > **Connect to server**.
2 Select **WebDAV (HTTP)** or **WebDAV (HTTPS)** from the drop-down menu.

3 Enter the information required, including server location, port, folder, and user account. Click **Connect** to continue.

4 Enter your password and click **Connect**.

To use WebDAV via Linux command line:

If you'd like to use command line, you can use **cadaver**, a command-line WebDAV client software to setup access.

To use WebDAV on Internet Explorer:

This is only supported in Internet Explorer 7 or earlier versions. If you are using Internet Explorer 8 or beyond, please consult other methods provided in help or use a WebDAV supported client software.

1 Click **Files** > **Open**.

2 Enter the address in the **Open** field. The address should include the IP or the DDNs of your DiskStation and the port number. An example would be **http://demo.no-ip.info:5005/**.

3 Enter your username and password. Click **OK**.

To use WebDAV on Firefox:

To use WebDAV on Firefox browser, you need to first install plug-in applications that support WebDAV, two of which are:

- **Trail-Mix**: www.trail-mix.com
- **Mozdev**: webfolder.mozdev.org

> ***Note:*** Windows Vista users have to first start WebDAV service by following the steps listed here before using WebDAV on web browsers.

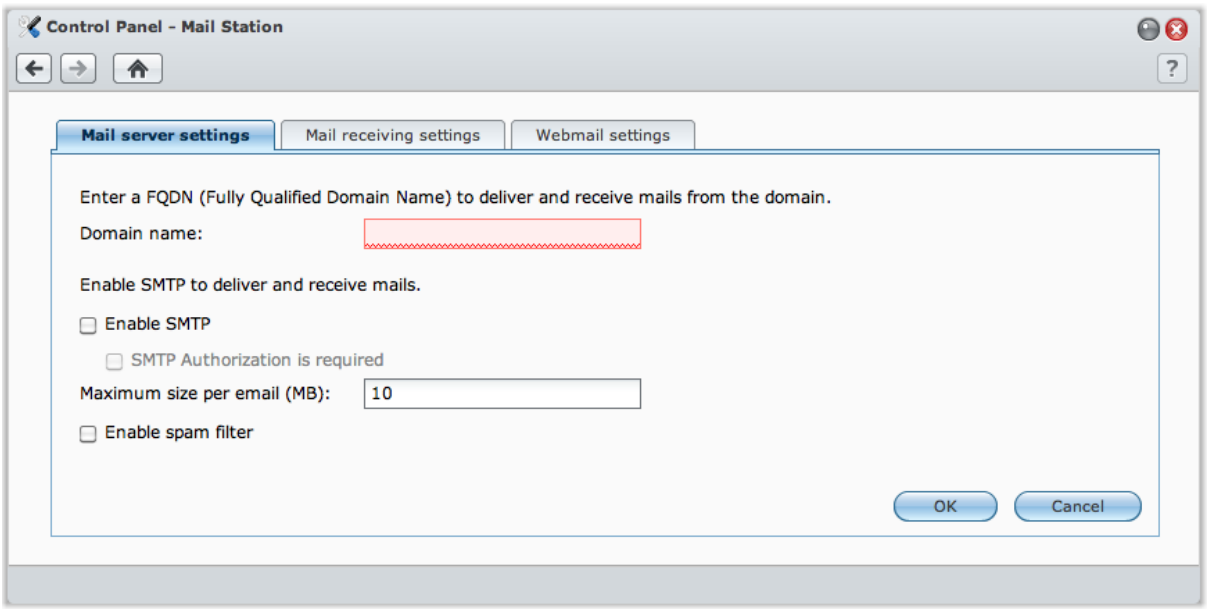
To use WebDAV on smartphones:

For smartphones such as iPhone or Android phones, you can use WebDAV via client apps. Examples:

- **iPhone: DAV-E** and **GoodReader**
- **Android phones: WebDavDroid** and **Mobile WebDAV**

Install Mail Station Package to Host Email Server

With the Mail Station package, you can turn your Synology DiskStation into a mail server, allowing Synology DiskStation users to receive and deliver mail messages.



Before using Mail Station, do the following first:

- Register a domain name for your IP, or apply for a DDNS hostname.

> ***Note:*** For more information about registering a DDNS account for Synology DiskStation, see "Give Synology DiskStation a DDNS Hostname" on Page 51.

- When applying for a domain name or dynamic domain name, please fill the MX (Mail eXchanger) record of mail domain with your mail server (that is the FQDN of Synology DiskStation).

  For example, if the mail server is **mail.synology.com**, then fill the MX record with **mail.synology.com**.

- Go to **Main Menu** > **Control Panel** > **User** and enable **User Home** service to allow users to store their mail messages in their home folders. Otherwise, they will not be able to send or receive mails.

> ***Note:*** For more information about User Home, see "Create User's Home Folder" on Page 66.

To install Mail Station:

1 Download and extract the **Mail Station** package from Synology's Download Center at: http://www.synology.com/support/download.php

2 Go to **Main Menu** > **Package Management** and install the downloaded Mail Station package.

> ***Note:*** For more information about installing packages for Synology DiskStation Manager, see "Manage Packages" on Page 166.

Confirm the port forwarding settings after the package is installed:

You should follow the table below to setup port forwarding if NAT is required.

Protocols	SMTP	POP3	IMAP	IMAPS	POP3S
Port	25	110	143	993	995
Note	IMAPS: IMAP over SSL/TLS POP3S: POP3 over SSL/TLS				

To set up Mail Station:

1 Go to **Main Menu** > **Control Panel** > **Mail Station**.

2 In the **Mail server settings** section, do the following:

a Fill in the **Domain name**. Your users' mail address will be: **user_name@domain_name** or **user_name@DDNS_hostname**

> ***Note:*** Make sure you entered the same domain name for your IP, or the same DDNS hostname you registered in **Main Menu** > **Control Panel** > **DDNS**.

b Tick **Enable SMTP to deliver and receive mails**.

c Tick **SMTP Authorization is required** if you want to prevent your mail accounts from being used as a spammer.

If you use this option, then your users must provide their Synology DiskStation user account and password for authentication while setting SMTP server in their mail clients. Take Outlook Express, for example, you can enable the option at **My server requires authentication** in **Tools** > **Accounts** > **Mail Account** > **Properties** > **Servers**.

d Tick **Enable spam filter** to avoid receiving junk emails.

3 In the **Mail receiving settings** section, enable at least one of the protocols (POP3, POP3 SSL/TLS,IMAP, and IMAP SSL/TLS) to receive mails via mail clients.

4 In the **Webmail settings** section, do the following:

- Tick **Enable Webmail (IMAP will be enabled automatically)** if you want the users to be able to use the webmail to send and receive mails.

> ***Note:*** Webmail operates via the IMAP protocol, so **Enable IMAP** will be automatically ticked when you enable webmail service.

- Click the link to your webmail next to **Webmail URL** to log in to your webmail with your Synology DiskStation user account and password.

Note:

- You cannot log in to the webmail with a user name that is not in English or without a password.
- For more information about using the webmail, see **Mail Station User's Guide** from Synology's Download Center at: **http://www.synology.com/support/download.php**

Set Synology DiskStation as the Print Server

Synology DiskStation can become the print server over your local area network by connecting up to 2 USB printers to your Synology DiskStation.

Set Up the USB Printer

You need to use Synology Assistant to set up your USB printer.

To set up the USB printer:

1 Connect the printer to the USB port of your Synology DiskStation.

2 Open **Synology Assistant** on your computer.

3 Follow the wizard to complete the setup.

Manage the USB Printer

Go to **Main Menu** > **Control Panel** > **External Devices** to manage the printers.

To eject a USB printer:

1 Disconnect the printer from the USB port of your Synology DiskStation.

2 Click **Eject**.

To clean up the printer spool space:

Click **Clean** to cancel the printing jobs for all printers.

Note: For more information about accessing the printer from different platforms, click the **Help** button (with a question mark) at the top-right corner.

Chapter 11

Share Photos, Videos, and Blogs with Photo Station

Photo Station is an online photo album integrated with a blog saved on your DiskStation. It makes creating albums and blogging fun and easy.

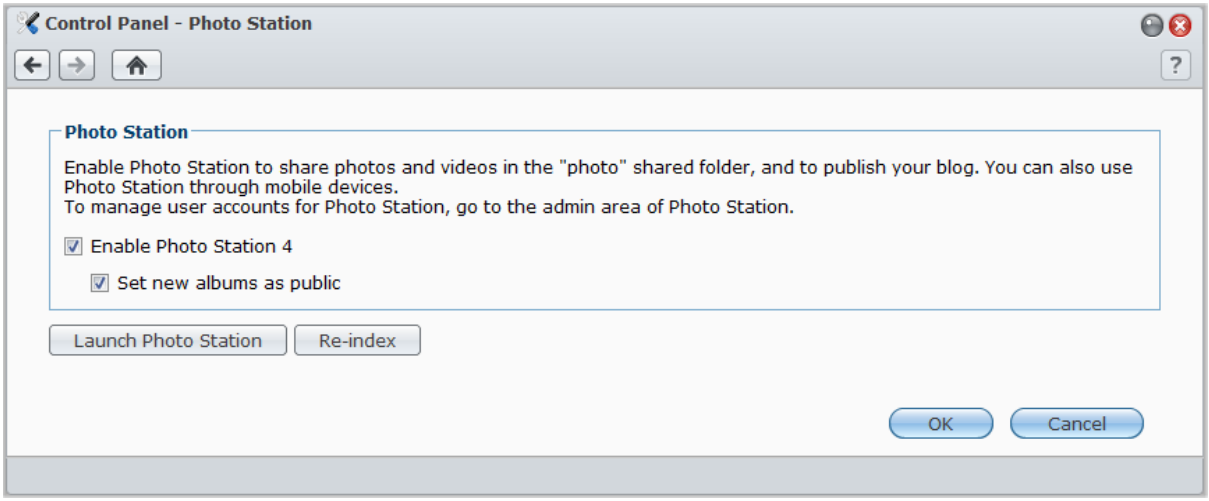
This chapter explains how to do the following:

- Create Photo Station user accounts
- Upload and download photos and videos
- Manage the albums
- Manage the thumbnail view
- Customize Photo Station background and theme
- Find photos and videos with the search function
- Manage blogs

Enable Photo Station

Go to **Main Menu** > **Control Panel** > **Photo Station** to enable Photo Station.

After it is enabled, the **photo** shared folder will be created automatically to contain your Photo Station data.



To enable Photo Station:

Tick **Enable Photo Station 4** and click **OK**.

To edit Photo Station settings:

1. Tick **Set new albums as public** if you want the uploaded photo albums available to visitors.
2. Click **Re-index** to reconstruct the index structure of the image files If you found missing images in Photo Station. The process will be executed in the background.
3. Click **OK**.

To launch Photo Station, do any of the following:

- Click **Launch Photo Station**.
- Go to **Main Menu** and click **Photo Station**.
- Type the following web address in the address bar of your web browser: **http://Synology_Server_IP_Address/photo/**

To connect via Mobile Device:

- Photo Station can be accessed using the web browser of a mobile device with Android OS 1.5 onward, iPhone OS 2.3.1 onward, or Windows Mobile 6.0 (Internet Explorer Mobile or Opera 9.0 or later).
- If you have a mobile device using iPhone OS 3.0 onward or Android OS 1.5 onward, you can also download DS photo+ on Apple App Store or Android Market to access Photo Station.

> ***Note:*** For more information about using mobile devices to access Synology DiskStation services, see "Chapter 17: Communicate with Mobile Devices" on Page 172.

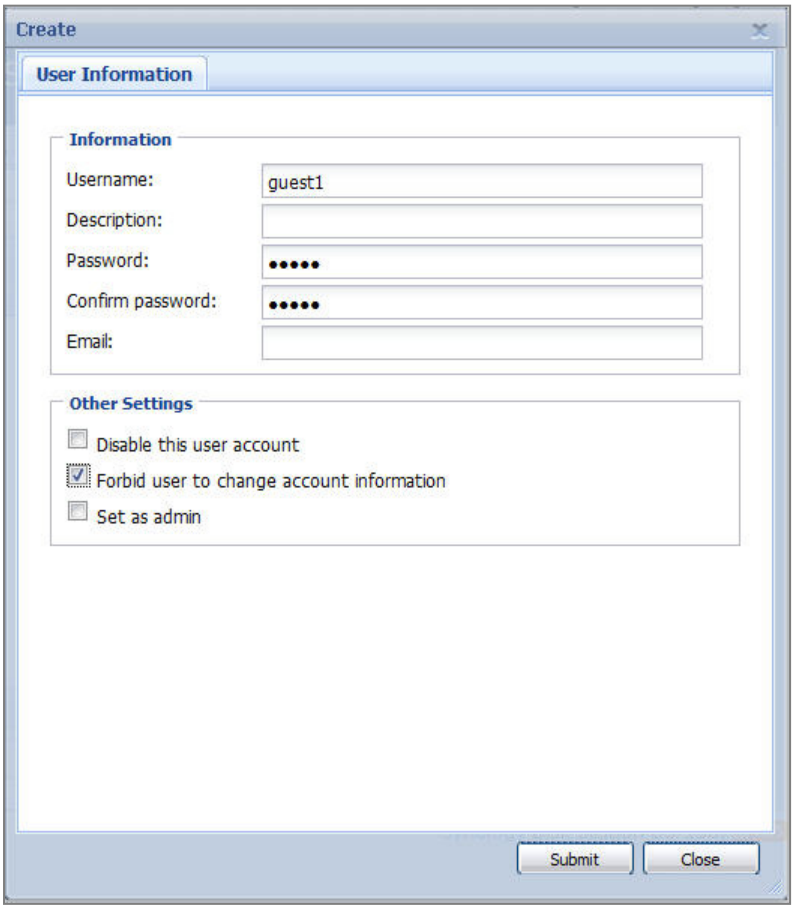
Support and Limitations

- **Video formats viewable on Photo Station:** 3G2, 3GP, ASF, AVI, DAT, DivX, FLV, M4V, MOV, MP4, MPEG, MPG, QT, WMV, XviD
- **Video formats not viewable but downloadable on Photo Station:** RM, RMVB, VOB, RV30, RV40, AC3, AMR, WMA3
- **Maximum image file size:** 20 MB (excluding images in RAW format)
- **Browser requirement:** JavaScript enabled
- **Microsoft Internet Explorer requirement:** ActiveX controls and plug-ins and Active scripting enabled
- **Upload limit:** If you upload contents with Photo Station, you can only upload up to 2GB of contents at a time.

Manage Photo Station User Accounts

Other than the system administrator, Photo Station does not share the same user account database with Synology DiskStation Manager. The system administrator can create, update, and delete Photo Station's user accounts.

Select **Settings** at the top of Photo Station's homepage, and then select the **User Accounts** tab on the **Synology Photo Station 4 Settings** page to add and edit Photo Station user accounts.



Add a New Account

1 Click **Create** and enter the username, description, and password.

2 If you like, do any of the following in the **Other Settings** section:

- Choose whether to allow this user to modify his/her account information.
- Choose if you want to set this user as **admin**. If this user is **set as admin**, he/she will be able to sign in with his/her own account and perform admin privileges.

3 Click **Submit**.

4 Under the **Access Permissions** tab, tick the checkboxes to allow the user to access private albums.

5 Under the **Upload Permission** tab, tick the checkboxes to allow the user to upload to the albums.

6 Click **Submit**.

Edit Existing User Accounts

1 Double-click the user or select the user, and click **Edit**.

2 Modify user's information and permissions under the **User Information**, **Access Permissions** and **Upload Permission** tab.

3 Click **Submit**.

> ***Note:*** By ticking **Disable this account**, you can deny the user's access until it's enabled again.

Remove a User Account

1 Select the user you want to delete, and click **Delete**.

2 Click **Yes**.

Manage and View Albums

This section explains how to upload a new album and manage its settings.

Upload Photos and Videos to Create a New Album

Select the photos and videos you want, put them in a folder that will become your new album.

You can use any of the following methods to upload the new album to the **photo** shared folder.

Upload within the Intranet

If your computer and Synology DiskStation are within the same Intranet, you can upload the album via the file sharing protocols for your platform.

> ***Note:*** For more information about accessing the **photo** shared folder within the Intranet, see "Access Files within the Intranet" on Page 78 for more information.

Upload over the Internet

If your computer and Synology DiskStation are not within the same Intranet, you can upload your album via File Browser or FTP.

> ***Note:*** For more information about accessing the **photo** shared folder over the Internet, see "Access Files via FTP" on Page 81 or "Access Files via File Browser" on Page 83 for more information.

Upload Using Photo Station

Now you can upload photos and videos to an existing album with Photo Station. See "Upload Photos and Videos to an Album" on Page 110 for more information.

Upload Using Photo Uploader

You can upload your albums to Synology DiskStation using Photo Uploader, one of the several functions of Synology Assistant.

Before uploading, Photo Uploader will use your computer to compress videos to H.264 format, and generate thumbnails for the photos and videos.

Note:

- You photos and videos will be converted to thumbnails during file upload. The length of time required largely depends on the size and the amount of files. For quick file uploading, we recommend you use the Photo Uploader application in Synology Assistant.
- For more information about using Photo Uploader, see the help of Synology Assistant.

Upload Using Smartphones

If you have an iPhone or Android phone, you can upload photos from your phone to Photo Station with DS photo+. See the DS photo+ Help for more information.

View Your Albums

After you connect to Photo Station, you will enter the **Photos** page, where you can see the albums you uploaded. Click the thumbnail of your album to see the thumbnails of all the photos and videos in the album.

You can also view the streaming videos in full screen to avoid long wait for downloading.

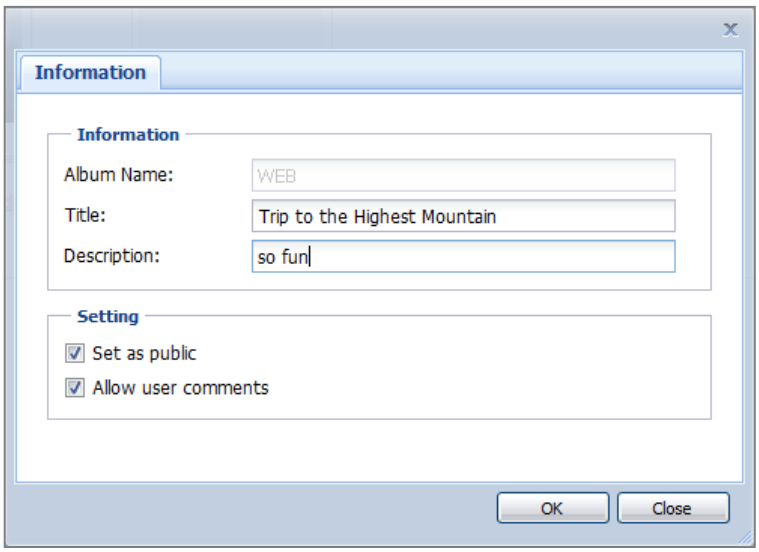
Manage Albums

Manage your albums with the upload, delete, download, and reorder functions. Edit the titles, descriptions, and access privileges according to your need. You can also enable virtual albums in Photo Station.

Delete Album

Remove the folders from the **photo** shared folder.

Edit Album Details



1 Go to Photo Station's homepage and click **Edit** under the album you want to edit.

2 Modify the album's information and users' access permissions.

3 Choose whether to allow users to comment on images in this album.

4 Click **OK**.

Upload Photos and Videos to an Album

You can allow users to directly upload photos and videos to an existing album via Photo Station.

Note: To upload photos and videos to a new album, see "Upload Photos and Videos to Create a New Album" on Page 109 for more information.

To upload photos and videos to an album:

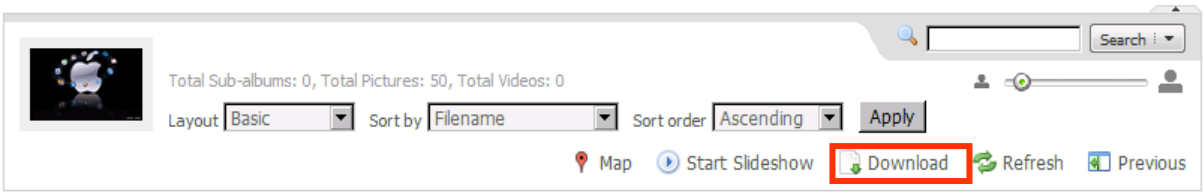
1 Select **Photos** at the top of Photo Station's homepage, and then select the album to which you want to upload photos and videos.

2 Click **Upload** in the album information to select and upload photos and videos to the album. (If you cannot see the button, click the tiny downward triangle in the top-right corner to reveal the album information. The downward triangle will not be displayed if you are using the **Photo wall** layout.)

> ***Note:*** Only users with the access and upload rights to the album can upload photos and videos. See "Add a New Account" on Page 109 for more information.

Download an Album

You can allow users to download albums via Photo Station.



To allow users to download albums:

1 Select **Settings** at the top of Photo Station's homepage, and then select the **Photo** tab on the **Synology Photo Station 4 Settings** page.

2 Tick **Allow users to download album** in **Other Settings** and then click **Save**.

To download an album:

1 Select **Photos** at the top of Photo Station's homepage, and then select the album you want to download.

2 Click **Download**. (If you cannot see the button, click the tiny downward triangle in the top-right corner to reveal the album information. The downward triangle will not be displayed if you are using the **Photo wall** layout.)

3 In the window that appears, do any of the following:

- Select **Download all** to download the entire album as a zip file.
- Select **Select items to download**, select the items you want to download and click **OK**. (Press and hold Shift or Ctrl while making multiple selections.)

Your selections will be downloaded as a zip file.

Refresh an Album

When viewing an album, you can refresh the screen by clicking **Refresh** on the right side and making sure the correct album information is displayed.

Reorder Albums

1 Select **Photos** at the top of Photo Station's homepage.

2 Click **Reorder Albums** and drag and drop the albums to reorder them. If you are using a touch screen, you can also reorder the albums with your fingers.

3 Click **Save**.

Set as Private Album

If you wish for the album to be accessible only by specific users, do any of the following.

Method 1:

1 Go to Photo Station's homepage, and click **Edit** under the album you want to edit.

2 Uncheck **Set as public**.

3 Assign users to the **Access Permission** list. You can also set the access permissions to the second tier album within an album, but only users with access to the first tier albums will be able to access the second tier albums.

4 Click **OK**.

Method 2:

1 Select **Settings** at the top of Photo Station's homepage, and then select the **Photo** tab on the **Synology Photo Station 4 Settings** page.

2 Click **Customize** next to **Access Permissions**.

3 In the window that appears, uncheck **Public** for the album you want to switch to private, and click **Save** to save the changes.

Note:

- This action will clear the albums' original access and upload rights. Please re-configure the albums' access rights and upload rights after saving the changes.
- You can set the new album as **public** by default from Synology DiskStation Manager. The second tier albums within the new album will inherit the same attributes from the first tier albums. See "Enable Photo Station" on Page 107 for more information.

Enable Virtual Album

Photo Station allows you to display the most recent photos and videos in virtual albums, which will be listed in front of all the other albums on the **Photos** page.

To Enable Virtual Album:

1 Select **Settings** at the top of Photo Station's homepage, and then select the **Photo** tab on the **Synology Photo Station 4 Settings** page.

2 Click **Customize** next to **Display Virtual Album** open the settings window.

3 Tick any of the following checkboxes to enable the virtual albums:

- Recent photos
- Recent videos
- Recently commented photos
- Recently commented videos

Customize the Themes for an Album

You can customize the album layout setting under **Photo** tab.

To customize the theme for an album:

1 Select **Settings** at the top of Photo Station's homepage, and then select the **Photo** tab.

2 Select **Custom** from the drop-down menu under **Style**.

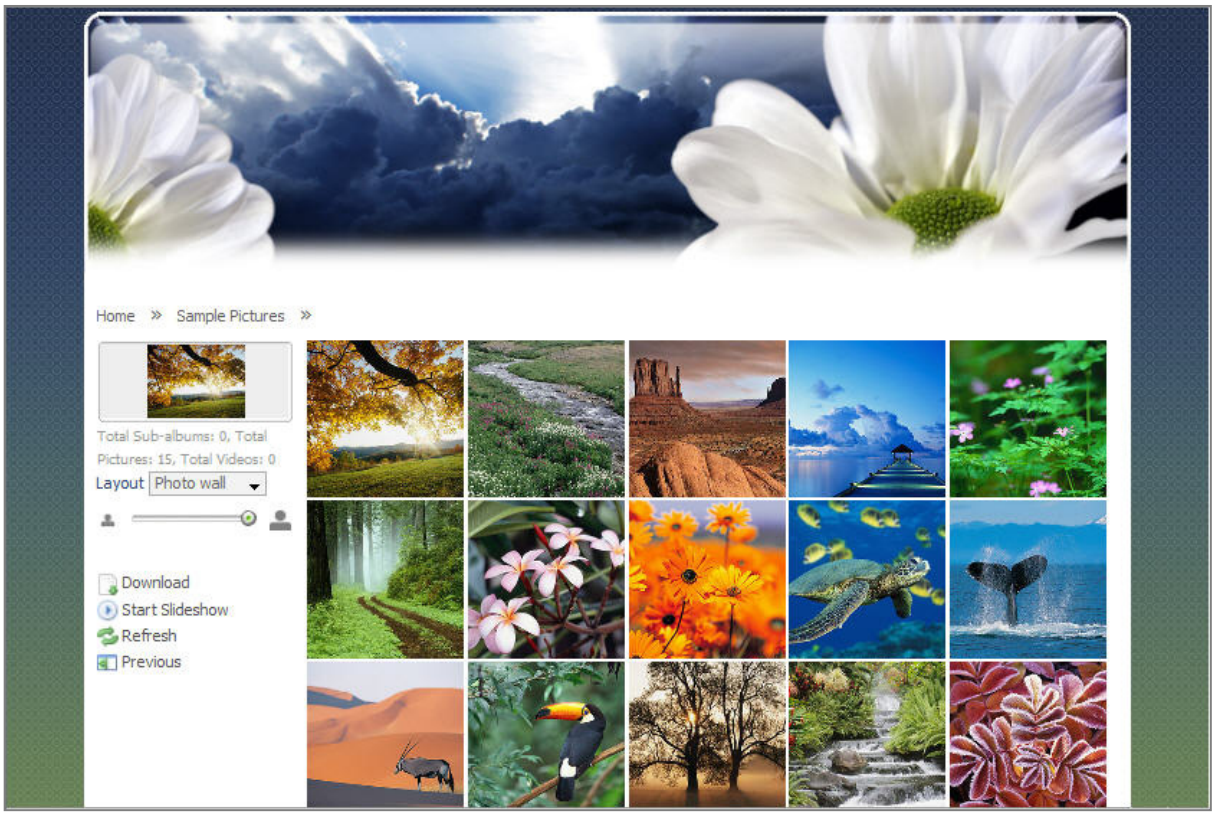
3 Click **Customize** to open the dialog.

4 Choose the block you would like to customize and modify your settings.

5 Click **Save**.

View and Customize Photos and Videos

After selecting the album, you can see the thumbnails of all the photos inside the album. Moreover, you can customize the thumbnails according to your preferences.



Change Thumbnail Settings and Order

Select **Settings** at the top of Photo Station's homepage, and then select the **Photo** tab on the **Synology Photo Station 4 Settings** page to change the following thumbnail settings and order:

- **To adopt a new layout for the photo thumbnails page,** choose **Basic**, **Photo wall**, or **Image Flow** from the **Thumbnail page layout** drop-down menu.
- **To determine the maximum width of the thumbnail,** enter a number in the **Default thumbnail size** field.
- **To determine the maximum number of thumbnails shown on a photo thumbnails page,** enter a number in the **Thumbnail per page** field.
- **To determine how the thumbnails are sorted,** choose an option from the **Sort by** drop-down menu.
- **To sort your thumbnails in ascending or descending order,** choose an option from the **Sort order** drop-down menu.
- **To determine the maximum width of displayed photo after clicking a thumbnail,** choose an option from the **Photo display size** drop-down menu.

View and Edit Photos and Videos

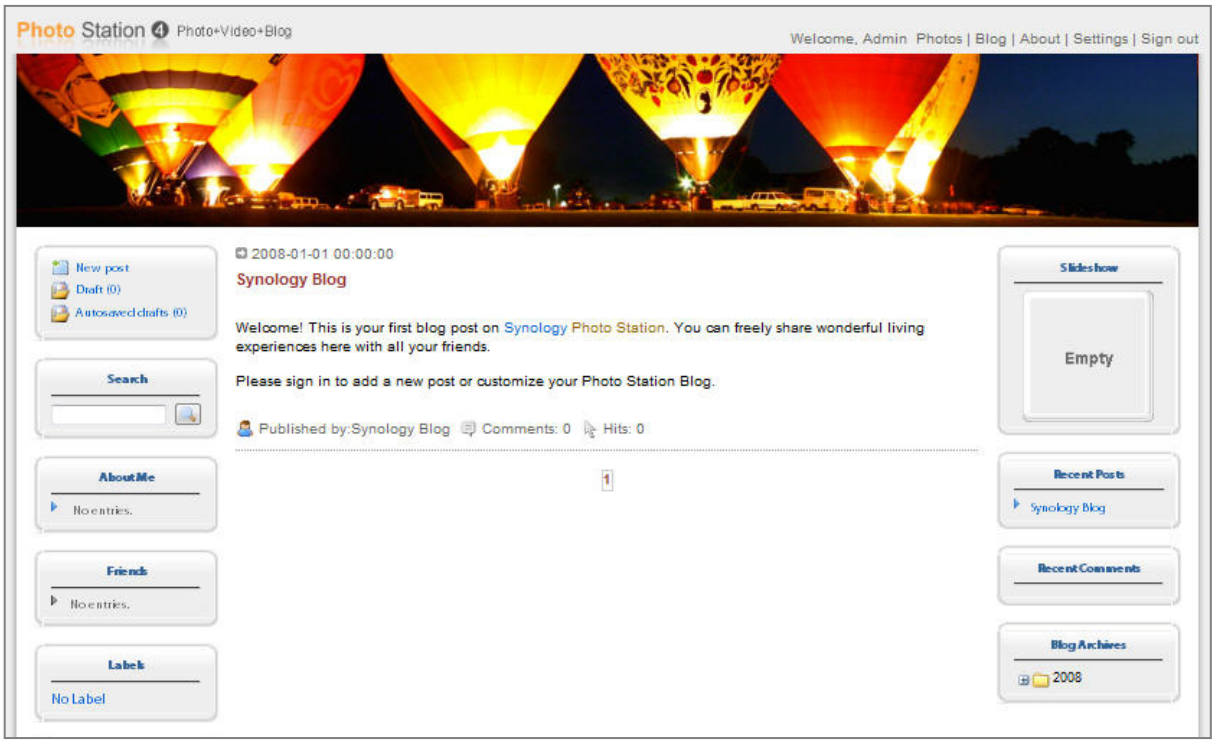
When you view a photo in an album, you can see its details and make changes to it using the following links above the thumbnail:

- **Information**: See the metadata information of the photo or video.
- **Map**: See where the photo is taken if your camera can record the coordinate information.
- **Rotate +90°** or **Rotate -90°**: Rotate the photo.
- **Set as Album Cover:** Set the photo or video as the cover of the album on the **Photos** page.
- **Blog it**: Add a new blog post with the photo embedded.
- **Start Slideshow**: Start a slideshow of the album.

Use the Blog

The administrator can post blogs on Photo Station now. Moreover, you can also personalize your blog space by adjusting the layout and modules.

Log in to Photo Station, and select **Blog** at the top of Photo Station's homepage to start editing your blog.



Add a New Post

1 Click **New post** on the left side.

2 Enter the post title, edit the post, and insert images or videos if you wish. To insert a video, click the **Insert/edit embedded media** button ( ) in the format bar above the text field, and then enter the video URL in the window that appears.

3 Select a label action from the **Label Actions** drop-down menu.

4 Click the **Settings** tab.

5 Choose readers from the drop-down menu.

6 If you wish to display a post abstract, tick **Show abstract when article is on main page** and enter the content.

7 To allow visitors to leave comments, tick **Allow comments**.

8 Click **Publish**.

Note:

- For the post title, you can enter up to 512 characters, whereas 40,960 characters are allowed for the post content.
- The following html tags in article content will be filtered out automatically:
  form, input, script, table, td, tr, tbody, th, html, body.

Delete a Post

1 Click the post title, and click **Delete post**.

2 Click **Yes** in the dialog window.

Personalize the Blog

The administrator can go to the **Settings** section to adjust the blog settings, such as changing the banner picture, naming the blog, editing the module settings, and deciding the blog layout, etc.

To edit basic blog settings:
Double-click the item or click **Customize** on the right side.

To edit module settings:
Choose a module from the drop-down menu, and click **Customize**. You can add your personal information here, or a slideshow of one of your photo albums, or links to your friends' sites.

To adjust the blog layout:
Go to the **Appearance Settings** area and click **Customize** next to **Page Width and Banner** or **Layout & Modules**, and decide the blog layout and modules you wish to display on the main page.

Find Old Posts

A Blog archive module contains all your posts, including those that don't appear on the main page.

To find an old post, do one of the following:

- Click the archive folders by year to unfold the monthly post records.
- Use the **Search** module to search all your previous articles with keywords.

Chapter

12

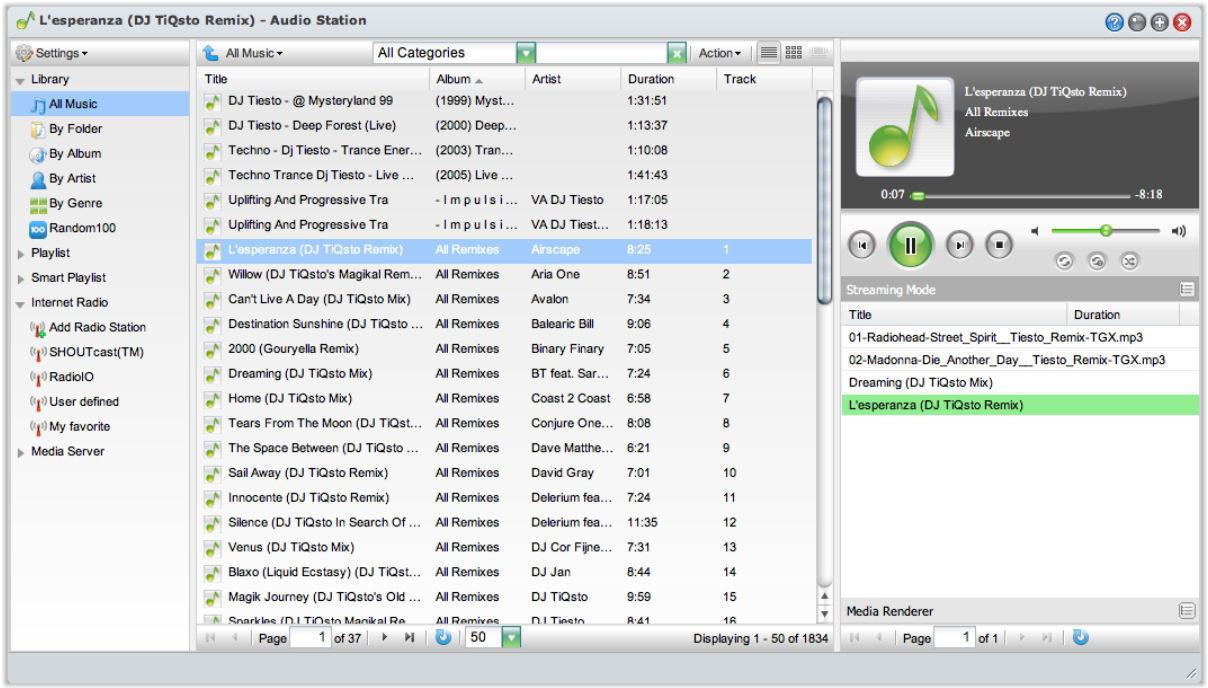
Play Music with Audio Station

Audio Station is a web-based audio application, allowing you to access the music library on your Synology DiskStation, choose available audio sources on the local area network, and add your favorite music to playlists for playback.

With Audio Station, you can also browse and play songs on your iPod or on the DLNA-certified Digital Media Servers, and listen to Internet radio.

Audio Station can play music through USB speakers connected to your Synology DiskStation, your computer, or DLNA-certified Digital Media Renderers.

This chapter explains how to enable Audio Station, choose audio source, browse music from the source, add music to the playlist, and add music and playlists to the queue panel for playback.

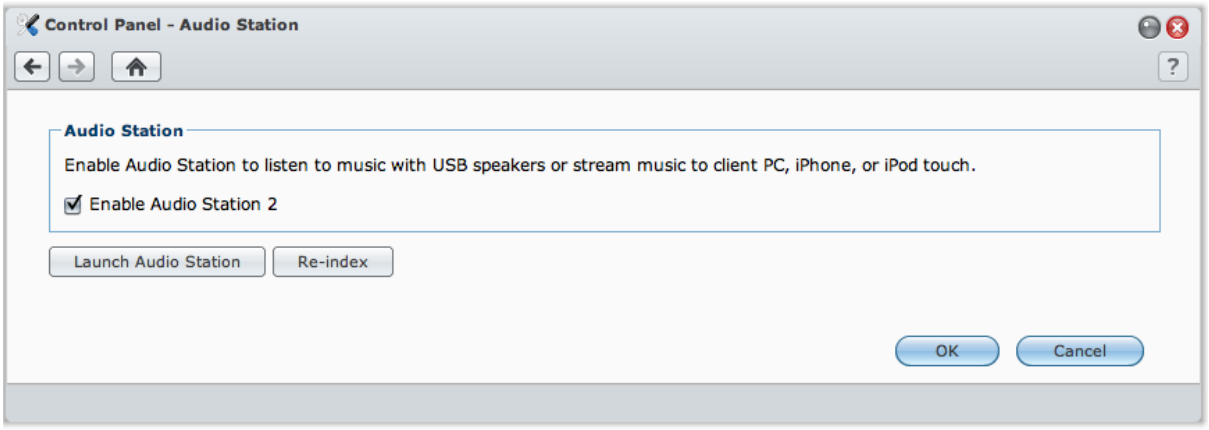


Note: Audio Station supports the following formats:

- **Audio:** (USB Mode) AAC, FLAC, M4A, MP3, Ogg Vorbis, WMA, WMA VBR; (Streaming Mode) MP3, M4A, M4B
- **Playlist:** M3U, WPL

Enable Audio Station

Go to **Main Menu** > **Control Panel** > **Audio Station** to enable Audio Station. After it is enabled, the **music** shared folder will be created automatically to contain your Audio Station data.



To Enable Audio Station:

Click **Enable Audio Station 2** and click **OK**.

To re-index audio files:

Click **Re-index** to reconstruct the index structure of the audio files If you found missing music in Audio Station. The process will be executed in the background.

To launch Audio Station, do any of the following:

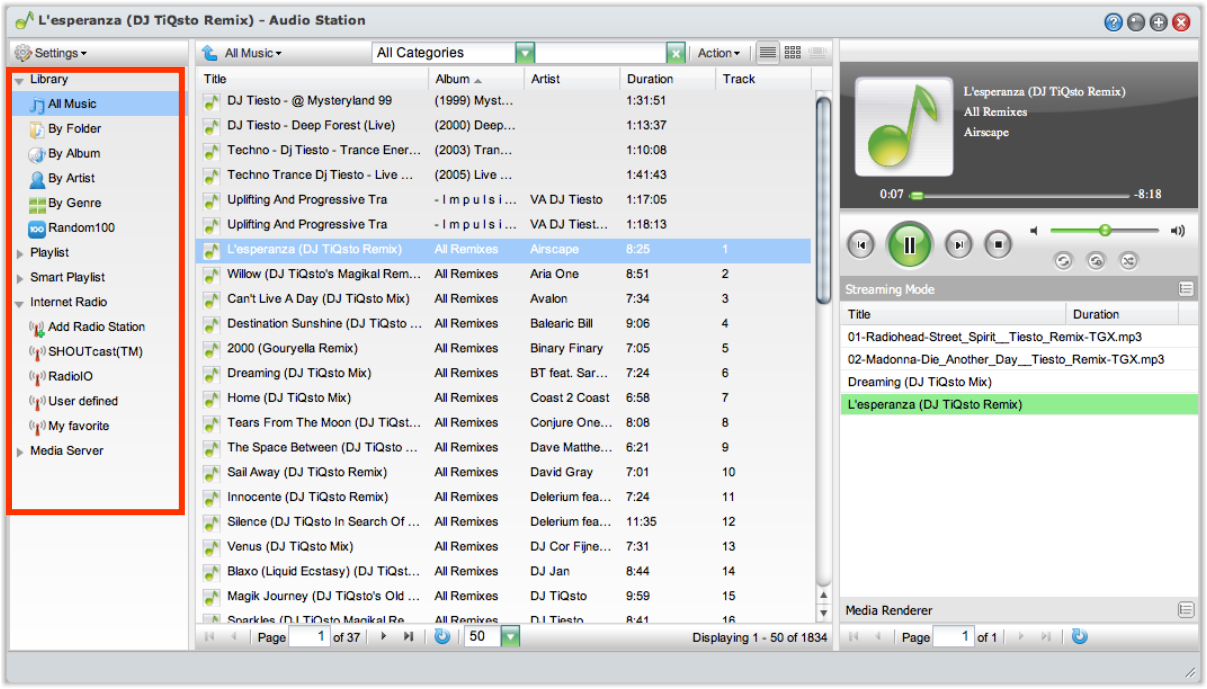
- Click **Launch Audio Station**.
- Go to **Main Menu** and click **Audio Station**.

To connect via Mobile Device:

You can download DS audio from Apple's App Store or Android Market to play the music in Audio Station with your iPhone, iPod touch and Android device. For more information about DS audio, see "Chapter 17: Communicate with Mobile Devices" on Page 172.

Choose Audio Source

On the left section of Audio Station are several audio sources you can choose from for playback on Audio Station.



Library

The library contains music in the **music** shared folders of your Synology DiskStation, which will be organized into the following categories.

To browse your music library, do any of the following:

- Click **All Music** to browse all music in the **music** shared folder.
- Click **By Folder** to browse music by directory.
- Click **By Album** to browse music by the album information of the song.
- Click **By Artist** to browse music by the artist information of the song.
- Click **By Genre** to browse music by the genre information of the song.
- Click **Random100** to browse 100 songs chosen randomly by the system.

Playlist

You can click the disclosure triangle next to **Playlist** to see your playlists.

To edit your playlist, do any of the following:

- Select **Refresh** to update all playlists.
- Select **New Playlist** to create a new playlist.

> ***Note:*** Only users with the **Manage Playlist** privilege (in **Settings** > **Privileges** in the top-left corner) can edit or add playlists.

Smart Playlist

You can click the disclosure triangle next to **Smart Playlist** to see your smart playlists.

To refresh your smart playlist:

Select **Refresh** to update all smart playlists.

To add or edit a smart playlist:

1 Go to **Main Menu** > **Control Panel** > **iTunes** in Synology DiskStation Manager.

2 Click **Smart Playlist** to add or edit your playlist.

> ***Note:*** for more information about editing the smart playlists, see "Use Smart Playlist" on Page 160.

iPod

You can click the disclosure triangle next to **iPod** to see the iPod connected to the USB port on Synology DiskStation.

To refresh iPod contents:

Select **Refresh** to update the iPod contents.

> ***Note:***
>
> - Audio Station only supports iPods formatted by iTunes for Windows.
> - Only users with the **USB Mode** or **Streaming Mode** privilege (in **Settings** > **Privileges** in the top left corner) have access to iPod contents.

Internet Radio

Audio Station comes with lists of Internet radio stations provided by **SHOUTCast(TM)** and **RadioIO**. You can also add your radio stations manually.

To add a radio station:

1 Select **Add Radio Station** to open the settings window.

2 Fill in the corresponding information (**Name**, **Description**, and **URL**) to add a radio station to the **User defined** list.

To see the list of radio stations:

1 Select an existing Internet radio provider or **User defined** list.

2 See the details of its radio stations in the main section.

> ***Note:*** Only users with the **USB Mode** or **Streaming Mode** privilege (in **Settings** > **Privileges** in the top left corner) can listen to Internet radio.

Media Server

Audio Station can browse and play media contents on DLNA-certified Digital Media Servers or other Synology DiskStations on the local area network.

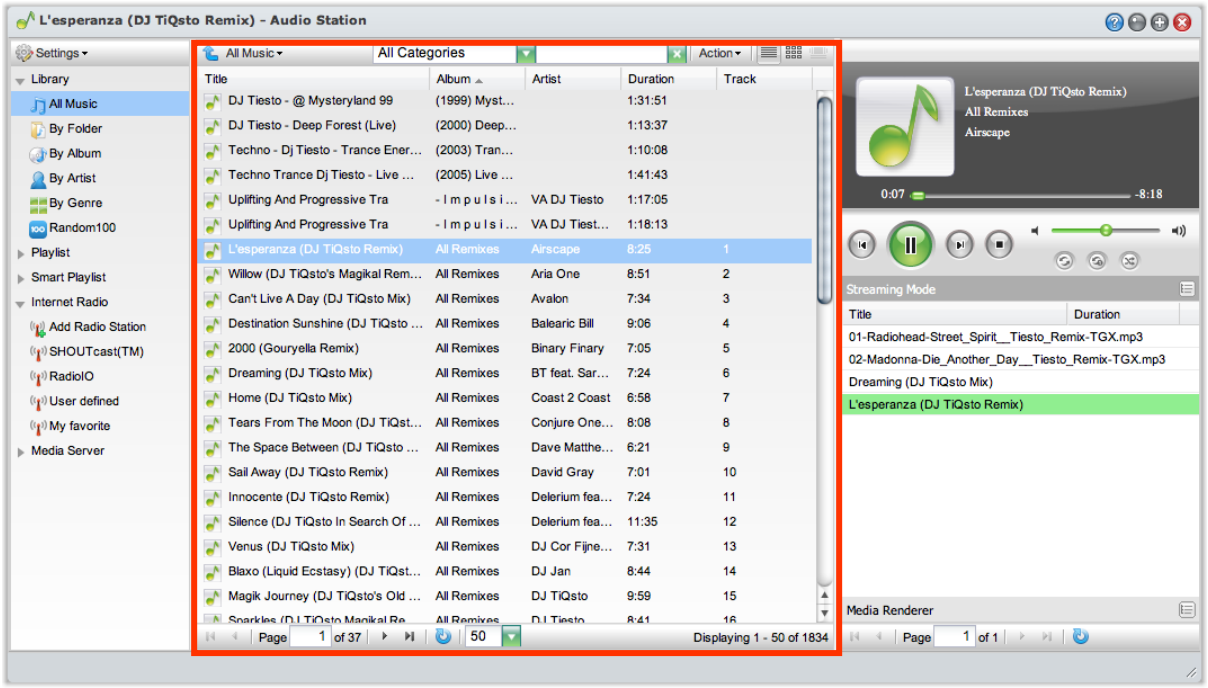
To search for media servers on the local area network:

Select **Scan Media Server** to search for available servers.

> ***Note:*** Only users with the **USB Mode** or **Streaming Mode** privilege (in **Settings** > **Privileges** in the top left corner) can play media server contents.

Organize Your Music

After selecting one of the audio sources on the left side, you can browse its contents in the main section of the Audio Station, and organize your favorite music into playlists.



Browse Music

You can change views, see your current location, and use the search field to find your music quickly.

> ***Note:*** If you see unreadable song titles, album names, or artist names while browsing through your music, go to Synology DiskStation Manager to set the correct codepage that matches the language of your computer, and then re-index your music. See "Specify Default Languages" on Page 29 and "Enable Audio Station" on Page 117 for more information.

Change Views

By clicking the three buttons above the main section, you can browse your songs in different views.

There are three views to browse your songs:

- **List** (the first button): Organize your items in a list.
- **Icon** (the second button): The icons or artwork (if any) of your songs or folders appear in the main section.
- **Cover Flow** (the third button): All icons/artwork and song/directory names appear using Cover Flow, a fancy way to flip through your library.

> ***Note:*** **Cover flow** is available only when browsing the library using **By Album** or **By Artist**.

See Your Current Location

You can use the **Up** button (on the right side of **Settings**) and the **Location** drop-down menu at the top of the Audio Station window to go back to previous directories.

To go back to the previous directory, do any of the following:

- Click the **Up** button to go back to the last directory.
- Choose a directory from the **Location** drop-down menu to choose a previous directory to go back to.

Search Music

You can use the search field above the main section of Audio Station to search your music.

To search music:

1 Choose a category from the **All Categories** drop-down menu.

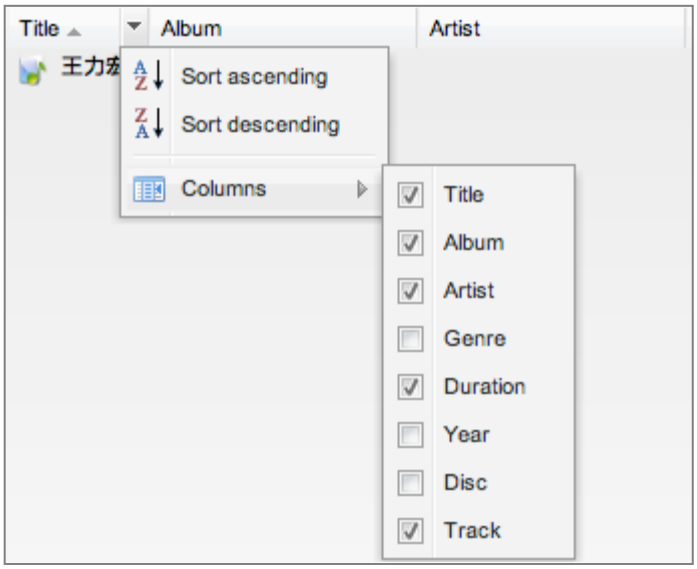
2 Enter a word or phrase in the search field.

3 Press Enter (PC) or Return (Mac) on your keyboard.

The search result will appear in the main section.

Display Additional Attributes

You can display additional attributes of your music to show them in new columns of the main section.



To display additional attributes:

1 Hover the pointer over any column header of the main section, and click the downward arrow that appears to the right of the header.

2 From the pop-up menu, choose the **Columns** submenu.

3 Tick the checkboxes next to the extra attributes to show them in new columns.

Work with Playlist

You can organize your songs into playlists to categorize and access your favorite music more easily.

To create a playlist, do any of the following:

- **Method 1:**
  - **a** Click **New Playlist** under **Playlist** to create an empty playlist.
  - **b** While browsing through the library, select any songs/radio stations in the main section.
  - **c** Drag the selected songs/radio stations to the playlist you just created.
- **Method 2:**
  - **a** While browsing through your library, select any songs/radio stations you want in the main section.
  - **b** Drag the selected songs/radio stations to **New Playlist** below **Playlist**.

Note:

- You cannot add folders to playlists.
- You can also add songs from the queue to a new playlist. See "About the Output Modes and the Queue Panel" on Page 122 for more information.

To rename or remove a playlist:

Right-click the playlist and choose **Rename** or **Delete**.

To adjust the order of songs in a playlist, do any of the following:

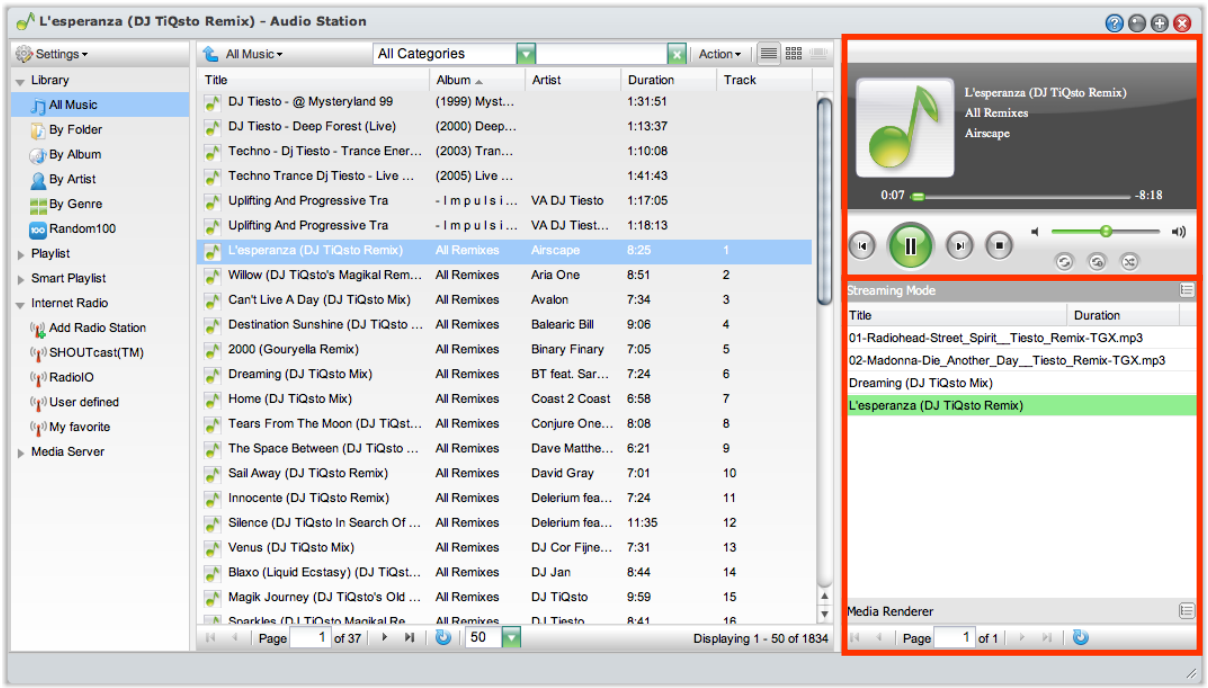
- Select songs in the main section and click **Up** or **Down** on the top to move them up or down in the playlist.
- Select and drag the songs up or down in the main section.

To remove songs from a playlist:

Press and hold Shift or Ctrl while making multiple selections, and right-click to choose **Delete**.

Play Music

The right side of Audio Station consists of the queue panel and the music player. You can play the music added to the queue with the music player.



About the Output Modes and the Queue Panel

To play music via different devices, you can add songs to the different output modes in the queue panel.

The output modes include the following:

- **Streaming Mode**: Stream music to your computer for playback via the speakers of your computer.
- **USB Mode**: Play music via the USB speakers connected to the USB port of your Synology DiskStation.

> ***Note:*** When you play music in the USB mode, you can also control music playback with the direction-free USB remote control. For more information about Synology Remote, visit www.synology.com.

- **Media Renderer**: Play music via a Digital Media Renderer (DMR) within your local area network.

Only one mode can be expanded at a time. When you add your music or playlist to the queue, the music will be added to the expanded mode.

> ***Note:*** You can play music in different modes at the same time.

Add Music to Queue

You can add your songs from the library to the queue panel on the right side for playback.

To add your songs from the library to the queue panel, do any of the following:

- Double-click an item in the main section to add it to the queue and start playing it right away.
- Select one or more items in the main section, and then drag them to the queue.

- Select one or more items in the main section, right-click and choose **Add selections to queue** to add selected songs to the queue.
- Right-click an item and choose **Add all to queue** to add all items in the same directory to the queue.

Add a Playlist to Queue

You can add or append playlists to the queue panel on the right side for playback.

To add a playlist to the queue and replace the existing songs in the queue:
Right-click the playlist and choose **Play**. Audio Station will play the songs in the playlist immediately.

To append a playlist to the queue without replacing the existing songs in the queue:
Right-click the playlist and choose **Add to queue**.

Manage Songs in the Queue Panel

To play a song in the queue:
Right-click the song and choose **Play** to play it right away.

To adjust the order of songs in the queue, do any of the following:
- Select and drag the songs up and down in the queue.
- Select the song, right-clicking one of them, and choosing **Up** or **Down**.

To add all songs in the current queue panel to a new playlist:
Right-click any of the songs and choose **Save the playing queue**.

To remove a song from the queue:
Select the song, right-click and choose **Remove**.

To remove all songs from the queue:
Right-click any of the songs and choose **Remove all**.

> ***Note:*** Only users with the **USB Mode** or **Streaming Mode** privilege (in **Settings** > **Privileges** in the top left corner) can access relevant modes.

Play Music with Music Player

You can play the music added to the queue with the music player.

The upper part of the music player displays the information of the currently playing music, including the song's title, album, artist, and duration. The lower part contains the controls you can use to control music playback.

To play a song:
Click **Play/Pause**, **Next**, or **Previous**.

To skip to any point in the currently playing song:
Drag the playhead along the timeline (below the song's duration) to any point you want.

To adjust the volume:
Drag the volume slider below the timeline.

To repeat the songs in the queue:
Click **Repeat All** (the first button from the left in the lower right corner of the music player).

To repeat the currently playing song in the queue:
Click **Repeat One** (the middle button in the lower right corner of the music player).

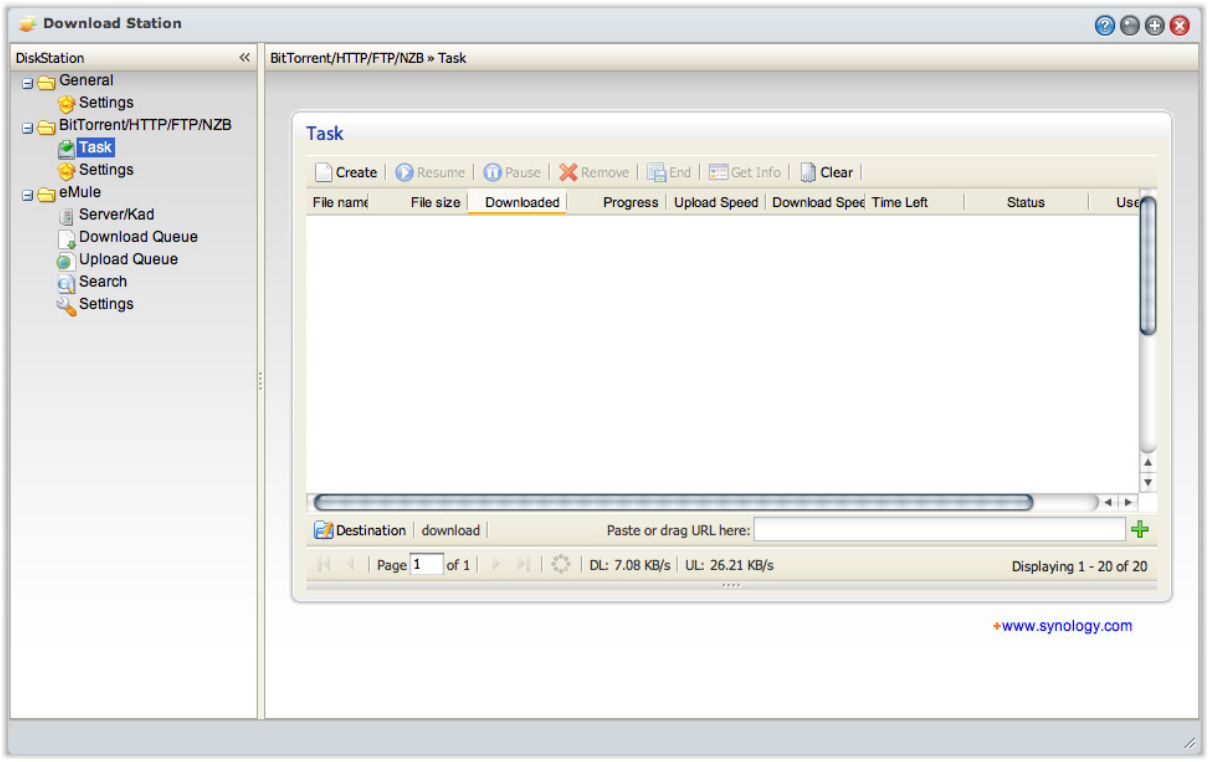
To play the songs in the queue in random order:
Click **Shuffle** (the third button from the left in the lower right corner of the music player).

Chapter 13

Download Files with Download Station

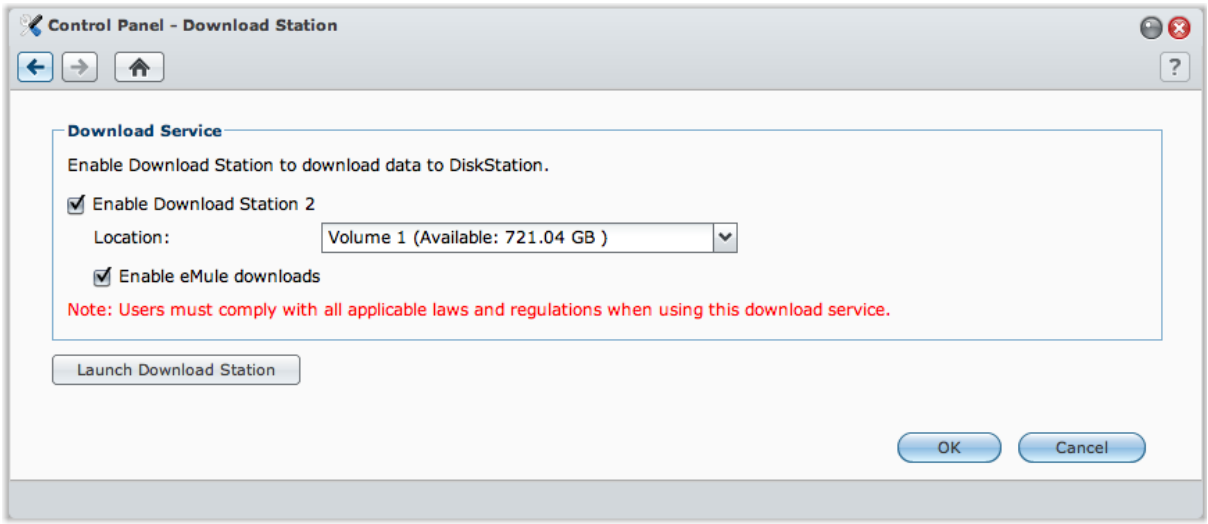
Download Station is a web-based download application, allowing you to download files from the Internet through BitTorrent, FTP, HTTP, NZB and eMule. BitTorrent partial file download is also available. In addition, you can set up Email notification to send a mail message to you when a download task is finished.

This chapter explains how to enable Download Station and manage the download tasks.



Enable Download Station

Go to **Main Menu** > **Control Panel** > **Download Station** to enable Download Station.



To enable Download Station:
Tick **Enable Download Station 2** and click **OK**.

Enable eMule Download

eMule is a peer-to-peer file sharing application that connects to both eDonkey and Kad network. You have to connect to an ED2K server before searching and downloading files on the eDonkey network.

To enable eMule download:
Tick **Enable eMule Downloads** and click **OK**.

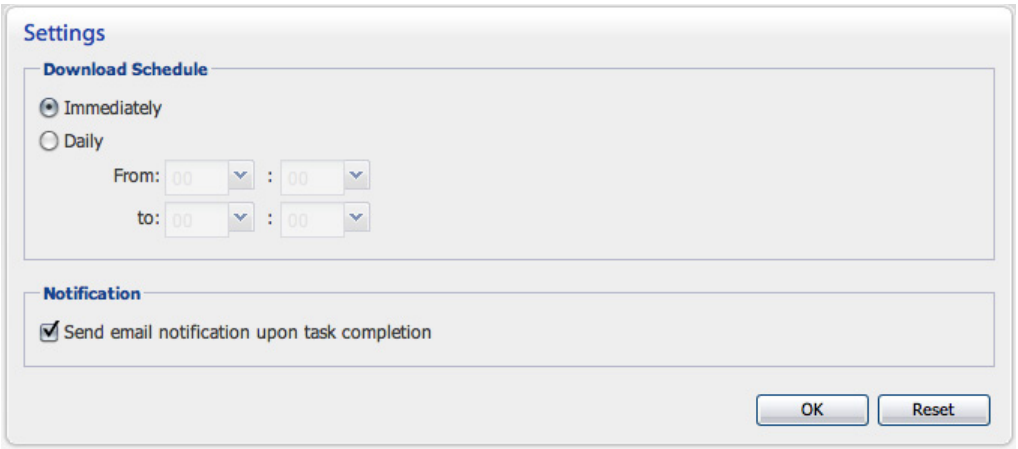
Connect to Download Station

To launch Download Station, do any of the following:

- Click **Launch Download Station**.
- Go to **Main Menu** and click **Download Station**.

Manage General Settings

Go to **General** > **Settings** to manage the general settings applicable for all types of download tasks, including BitTorrent, HTTP, FTP, NZB, and eMule.



Set Download Schedule

You can limit Download Station's download task to certain time period of a day, so that you can free up more network bandwidth when needed.

To set the download schedule:

1 Do any of the following:

- Choose **Immediately** to allow download tasks to continue without stop.
- Choose **Daily** and enter the time period to limit download tasks to certain time period of a day.

2 Click **OK**.

Set Email Notification

You can have Download Station send email notifications to download task owners when a task is completed.

Before you start:
For the setting to take effect, you must go to **Main Menu** > **Control Panel** > **Notification** and enter the SMTP settings.

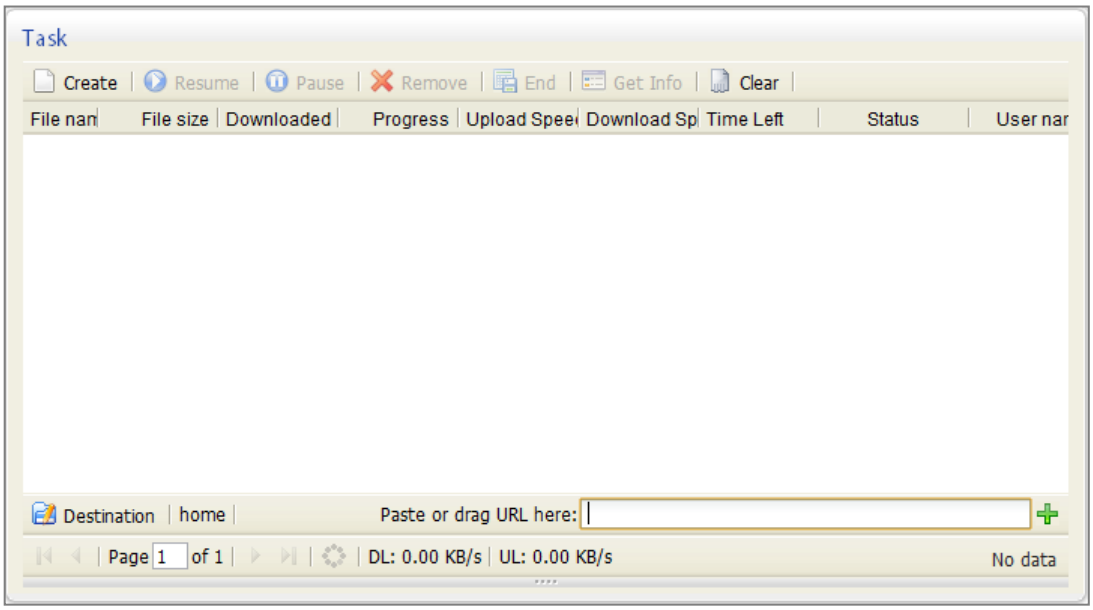
To enable email notification:

1 Tick **Send email notification upon task completion**.

2 Click **OK**.

Download BT/HTTP/FTP/NZB Files

After you connect to Download Station, you will enter **BitTorrent/HTTP/FTP/NZB** > **Task**, where you can set the download destination folder and start downloading.



Set the Download Destination Folder

The shared folder used as the download destination is shown on the lower left part of the **Task** page.

To change the destination folder:

1 Click **Destination**.

2 Choose the shared folder where you want to save the downloaded files.

3 Click **OK**.

Manage Download Tasks

To create a download task:

1 Click **Create**.

2 Choose one of the download methods:

- **Enter URL**: Enter the URL of the file.
- **Open a file**: Click **Browse** to locate the file to be downloaded. (If you have installed Flash Player 9.0.28 or later, you can make multiple selections.)

3 Click **Create**.

To create a RSS download task:

1 Click **Create**.

2 Enter the URL in the **Enter RSS URL** field and click **Create**.

3 If the entered RSS link is valid, a dialog will appear with a list of files.

4 Select one or more files to download and click **OK**.

Note:

- A RSS document, also known as a **RSS feed**, contains a list of download information, such as the download link, file size, etc.
- Some download links in the RSS file are links to a web page rather than the actual file. This kind of RSS files will not be supported.

To pause/resume/remove download tasks:
Select the download tasks and click **Pause**, **Resume**, or **Remove**.

To end an incomplete or erroneous download task:

1 Select the download tasks and click **End**.

2 Click **OK** to end the task. The files will be moved to your destination shared folder.

> ***Warning:*** You cannot resume or restart a task after ending it.

To view detailed information about a download task:
Select the download task and click **Get Info**.

To clear finished download tasks:
Click **Clear**. Downloaded files will remain in the destination shared folder.

To change the list order of download tasks:
To sort the list of download tasks, click the column headers. Default ordering is by the creation date of the download tasks.

To download a FTP folder:
Enter the FTP link with the forward slash (/) at the end of the link. All of the files and subfolders in the folder will be downloaded.

Troubleshooting

When errors occur, all action buttons will be disabled. You can enable the action buttons by checking the possible errors:

- Download Station is disabled.
- The network is down.
- Download destination is not set.
- Your account is disabled or removed.
- Unknown Error happened.

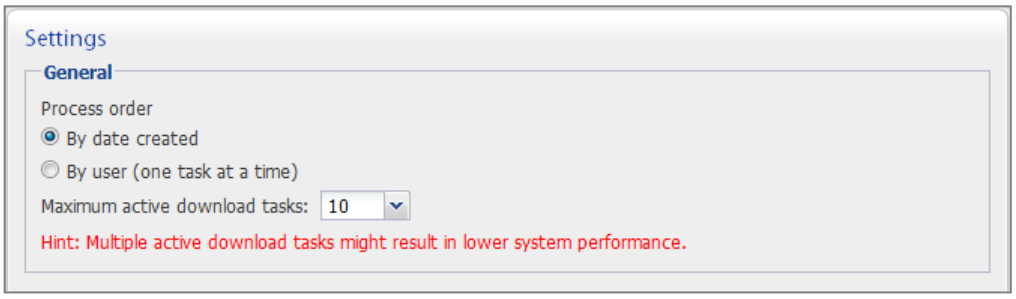
If the problem still exists after checking the above list of possible errors, contact Synology Support at: www.synology.com

Manage BT/HTTP/FTP/NZB Settings

Go to **BT/HTTP/FTP/NZB** > **Settings** to manage the BT/HTTP/FTP/NZB download settings.

Choose a Process Order

In the **General** section, select any of the following process orders.



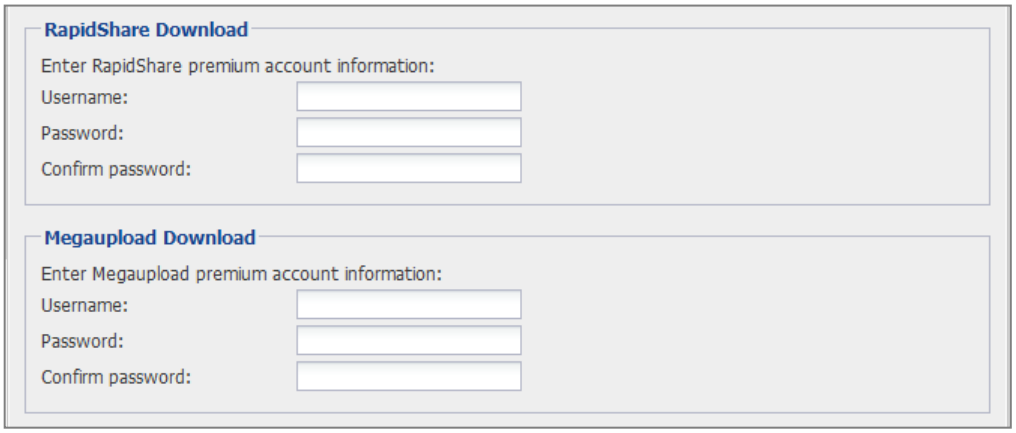
- **By user (one task at a time)**: Sort the order of download tasks by the users who added the download tasks.
- **By date created**: Sort the order of download tasks by the date they are added.

> ***Note:*** Choosing **By user** can improve the fairness among users, so it is recommended when more than one user are downloading files.

Edit RapidShare and Megaupload Download Settings

There are many online file sharing websites, where registered users can upload files and share the download links to the files with other people.

Now Synology provides support for two of such websites: **RapidShare** and **Megaupload**. If you have a premium membership for the websites, you can use Download Station to download their files.



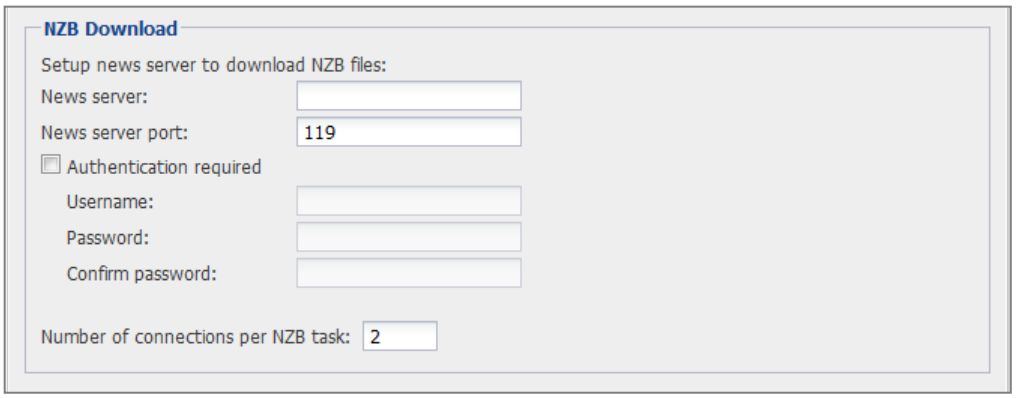
To allow Download Station to download Rapidshare or Megaupload files:

In the **RapidShare Download** or the **Megaupload Download** section, enter your account information and click **OK**.

Note: Fees apply to sign up for a premium membership. Visit their websites for more information.

Edit NZB Download Settings

With Download Station, you can download NZB files via a news server. To download NZB files, you must enter the information for the news server and your account.



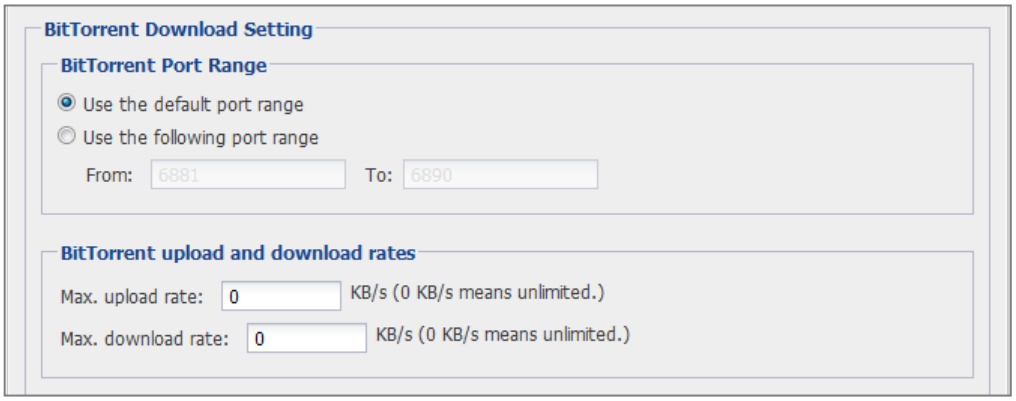
To enter the information for the news server and your account:

Enter the information in the **NZB Download** section.

Note: **Number of connections per NZB task** is usually limited by your news server, but you can still limit the number of maximum connections to each NZB task by giving it a value.

Edit BitTorrent Download Settings

In the **BitTorrent Download Setting** section, you can edit the following settings for downloading BitTorrent files.



- **BitTorrent Port Range**: By default, the BitTorrent port range is from 6881 to 6890. You can also specify a range from 1 to 65535. The port range should contain at least 10 ports.

  Note: You cannot use the following port number for BitTorrent access, because they are reserved for system use:

  - **Port Number:** 20, 21, 22, 23, 25, 80, 110, 137, 138, 139, 143, 199, 443, 445, 515, 543, 548, 587, 873, 993, 995, 3306, 3689, 5000, 5001, 5335, 5432, 9997, 9998, 9999
  - **FTP default port range:** 55536-55663
  - **Surveillance Station default port range:** 55736-55863

- **BitTorrent upload and download rates**: Enter the maximum upload and download rate in the fields (must be larger than 1 KB/s).

Note: For more information about other BitTorrent settings, see the Help section of the **BitTorrent/HTTP/FTP/NZB** > **Settings** page.

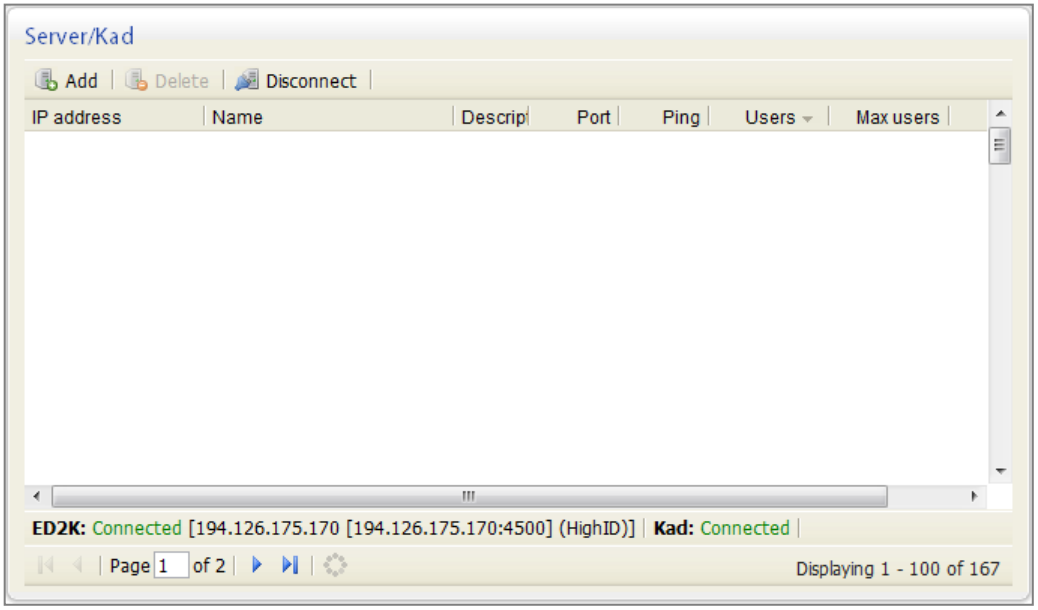
Download via eMule

Go to **eMule** to add eMule servers, search ED2K files, and manage download tasks.

Add ED2K Server/Kad

It is necessary to connect to an ED2K server to access the resources on an ED2K network. An ED2K server provides an index for the shared resources of the connected users, allowing all users to search and download the sources.

Go to **Server/Kad** to connect to an ED2K server or a Kad network.



To add an ED2K server:

1 Click **Add** to open the settings window.

2 Do any of the following:

- Choose **Server IP** and enter the IP address and port of the server.
- Choose **ED2K link** (e.g. ed2k://|server|IP|port|/).

3 Click **Add**.

To delete an ED2K server:

Select one or more servers from the list and click **Delete**.

To connect to a random ED2K server:

1 Click **Connect** without having a server selected.

2 Wait for any random server to be connected.

To connect to a specific ED2K server:

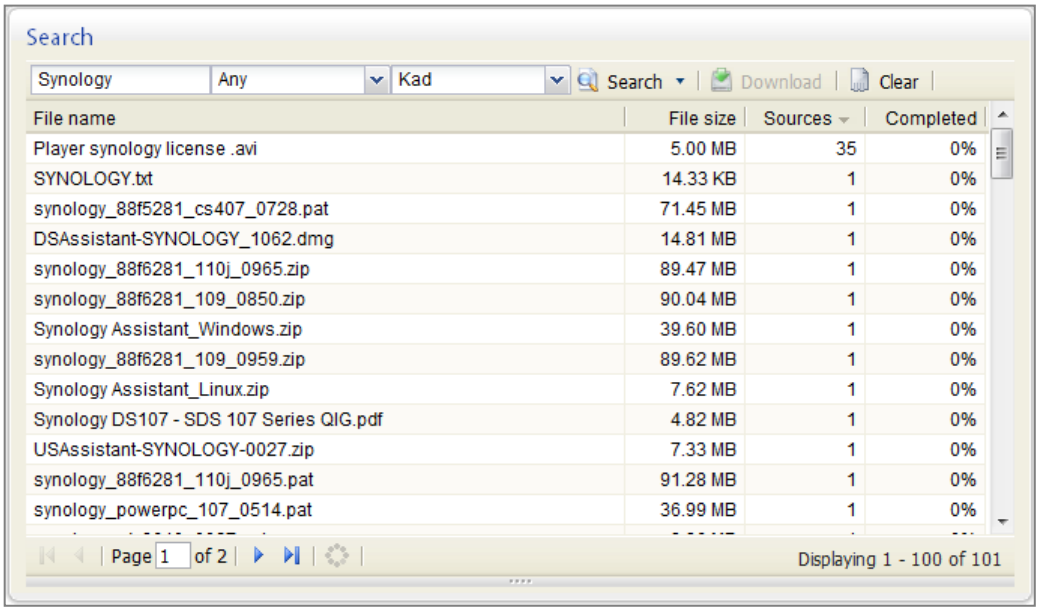
1 Select a server from the server list and click **Connect**.

2 Wait for the server to be connected.

3 Wait for any random server to be connected if the selected server is full or has an invalid IP address.

Search with eMule

Go to **Search** to search the files you want to download.



To perform general search:

1 Enter a keyword and select a file type.

2 Select any of the following search method:

- Local
- Global Server
- Kad

3 Click **Search** to start the file search.

The search result might be shown in the following colors:

- **Blue**: There are sufficient sources available on the network for those files.
- **Red**: The file is already in the download queue or in the download destination.

To perform advanced search:

1 Click the down arrow to the right of the **Search** button.

2 Enter a keyword and select a file type.

3 Select any of the following search method.

- Local
- Global Server
- Kad

4 Enter the minimum and maximum file size for the desired files. (optional)

5 Enter the minimum number of sources. (optional)

6 Enter the file extension. (optional)

7 Click on the **Search** button to start the file search.

To stop searching or clear the search result:

Click **Stop** or **Clear** to stop searching or clear the search result.

To add searched files to eMule download queue:

1 Double-click the file or select one or more files in the list.

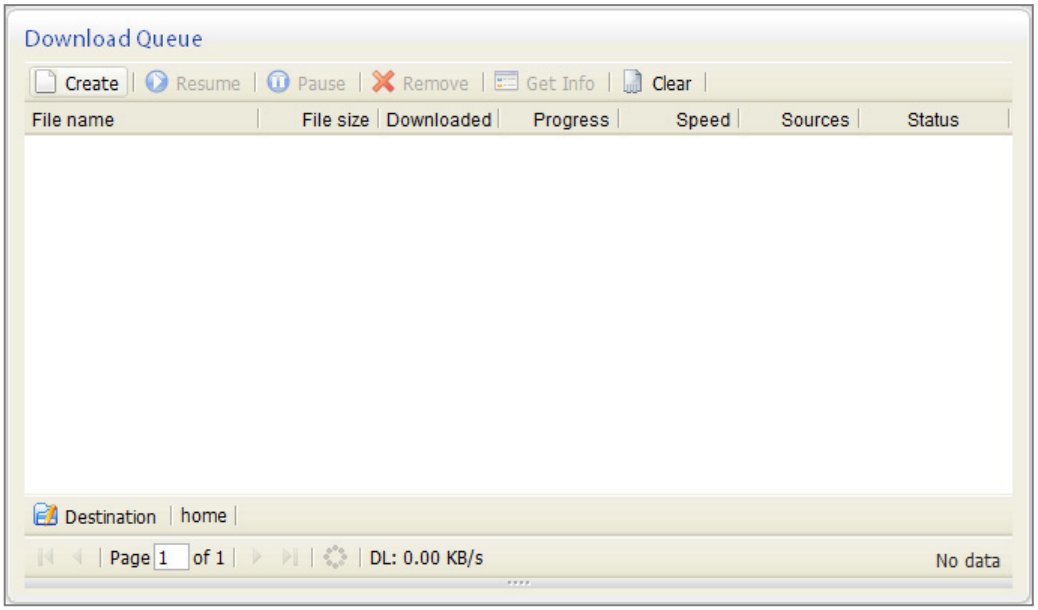
2 Click **Download**.

The selected tasks will be added to the download queue to begin downloading.

> ***Note:*** Files already exist in the download queue will not be added to the queue.

Manage eMule Download Tasks

Go to **Download Queue** to set the destination folder and manage the download tasks.



To set the destination folder:

1 Click **Destination** in the lower-left corner.

2 Choose a shared folder and click **OK**.

To create download tasks:

1 Click **Create** to open the settings window.

2 Do any of the following:

- Upload a text file containing multiple ED2K links
- Enter up to 20 ED2K links in the **Enter URL** field.

3 Click **Create**.

To delete, pause or resume a download task:

1 Select one or more tasks you want to delete, pause or resume.

2 Click **Delete**, **Pause** or **Resume**.

To view the detailed information of a task, do any of the following:

- Double-click a task.
- Select a task and click **Get Info**.

If you like, select a desired priority for the task.

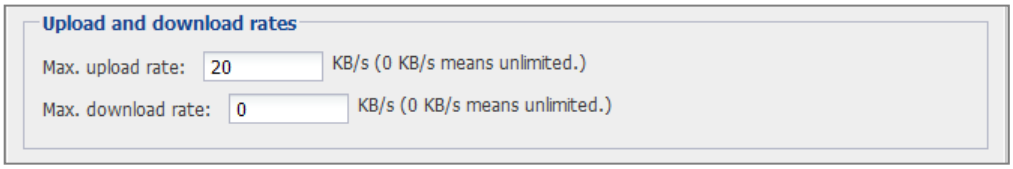
Check eMule Upload Queue

Go to **eMule** > **Upload Queue** to view all files that are currently uploading including the user name, the file name, the file size transferred, the download speed, the time they waited on the waiting queue, and the upload time.

> ***Note:*** The default shared folder will be the same as the download destination that you configured in **Download Queue**. If you do not wish to share particular files, please move them to another directory.

Change eMule Download or Upload Speed

Go to **Settings**, and enter the maximum download or upload rates in the **Upload and download rates** section.



Note: For more information about the eMule settings, go to **eMule** and click the **Help** button (with a question mark) at the top-right corner of the **Download Queue** and **Settings** page.

Chapter 14

Safeguard Your Environment with Surveillance Station

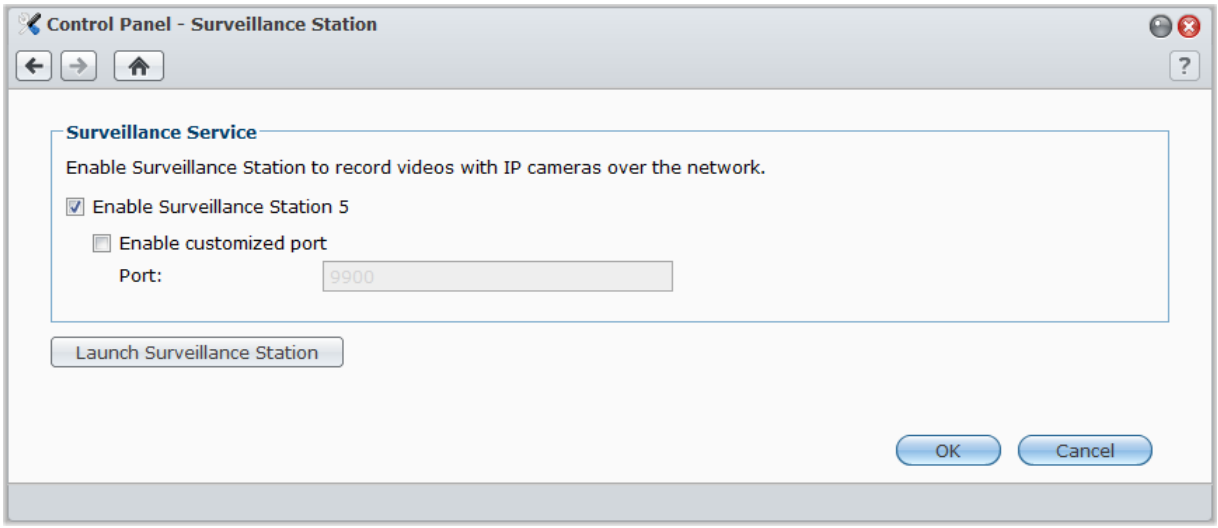
Surveillance Station is a web-based application that can manage IP cameras to safeguard your home or office environment.

This chapter explains how to manage IP cameras, watch and record live view videos, set up scheduled recording, playback recorded events, and use all the other comprehensive features provided by Surveillance Station.

Enable Surveillance Station

Go to **Main Menu** > **Control Panel** > **Surveillance Station** to enable Surveillance Station.

After it is enabled, the **surveillance** shared folder will be created automatically to contain your Surveillance Station data. The shared folder is read-only and can be accessed only by **admin**.



To enable Surveillance Station:

Tick **Enable Surveillance Station 5** and click **OK**.

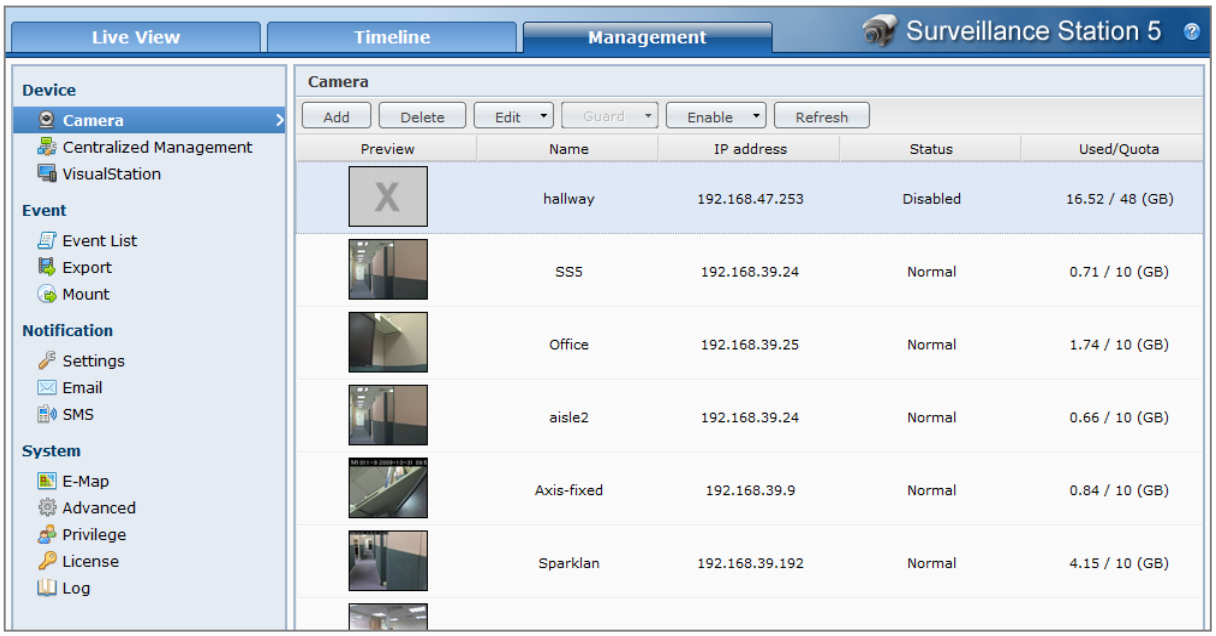
To launch Surveillance Station, do any of the following:

- Click **Launch Surveillance Station**.
- Go to **Main Menu** and click **Surveillance Station**.

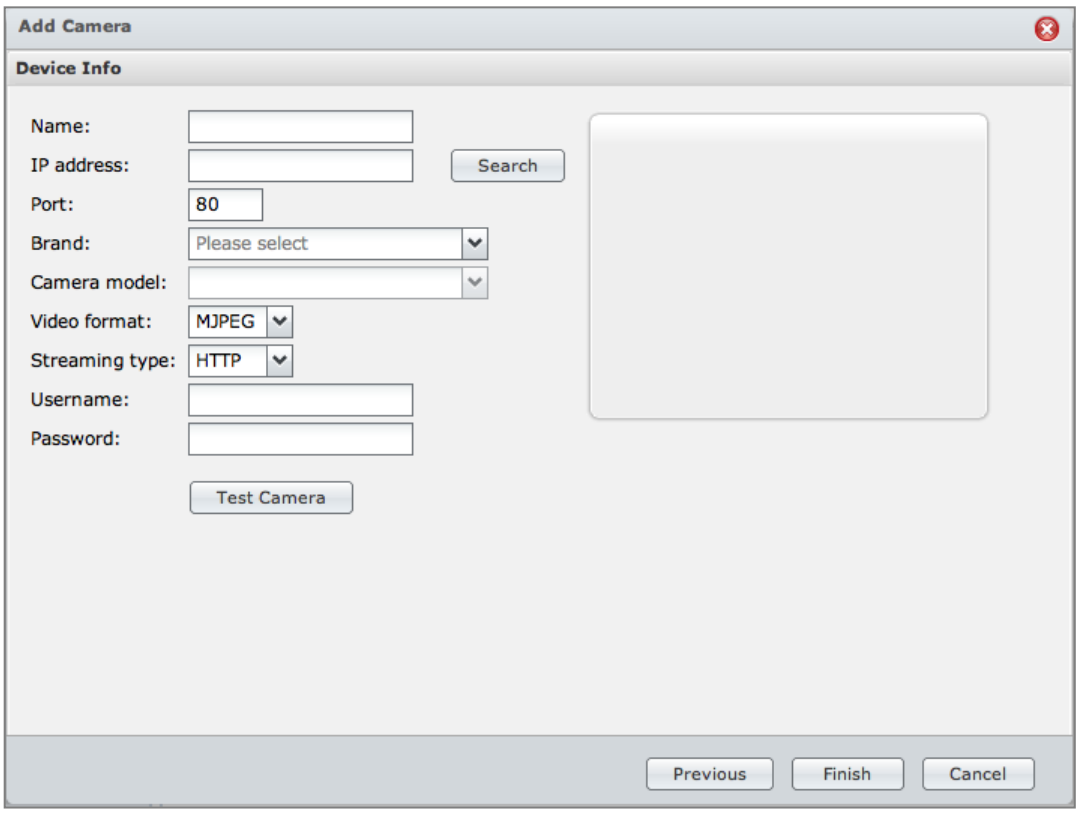
Surveillance Station will be launched in a new browser window.

Manage IP Cameras

Go to **Device** > **Camera** under **Management** to add and edit cameras, set up recording schedule, and set up the guard settings.



Add a Camera



1 Click **Add**.

2 Choose **Quick Setup** or **Complete Setup** and click **Next**.

3 Edit the following **Device Info** settings:

   a Enter a name for identifying this camera.

b Enter the camera's IP address or host name. You can also click **Search**, the system will search the IP camera installed at the same domain. Once the camera is selected, the system will automatically display the IP address, port number and model of the camera.[5]

c Change the port number if the camera is using another port.

d Select the camera brand from the drop-down menu.

e Select the camera model from the drop-down menu.[1]

f Select the video channel from the drop-down menu if the camera device is a video server.

g Select the video format from the drop-down menu.[2]

h Select the streaming type from the drop-down menu.[3]

i Enter the username and password of the camera's administrator account.

j Click **Test Camera** to see if the camera can be correctly connected.

4 If you selected **Quick Setup**, click **Finish** to complete setup. Otherwise, click **Next** to edit the **Video** settings:

a Select the **Image quality**, **Resolution**, and **Frame rate**[4] for recording image and live view image.

b Select the live view source from either Surveillance Station or directly from camera. Choosing live view source from the camera will mitigate the server loading and minimize the possible time delay. However, you will have to configure the camera's port forwarding to live view via Internet.

5 Click **Next** and edit the **Recording** settings:

a Choose either **Motion detection by the camera** or **Motion detection by Surveillance Station (MJPEG only)**. Choosing **Motion detection from the camera** will mitigate server loading and minimize the possible time delay. Choosing **Motion detection by Surveillance Station (MJPEG only)** will provide Motion detection capability to camera models without this function built-in.

b Tick the checkbox of **Enable motion detection while in continuous recording mode** or **Enable alarm recording while in continuous recording mode** at your preference. Different events will be displayed in different colors on the event timeline.

c Select the time length of each saved video file under continuous recording mode.

d Select **Pre-recording time** and the **Post-recording time** under event recording mode.

e Select **Enable audio when recording** and choose **Audio format** if your camera supports the function.

6 Click **Next** and edit the following **Storage Settings**:

a Enter a name for the event archive folder that will be used to save the recorded videos.

b Enter the file name prefix that will appear in front of each file name.

c Tick **Keep the files within (days)** or **Limit the archive folder up to (GB)** and specify the value. Archives will be saved and deleted according to the settings.

d Click **Estimate Required Space** to evaluate the space usage.

7 Click **Next** and edit the following **Schedule** settings:

a To set a schedule plan for automatic recording, click the **Continuous Recording**, **Motion Detection Recording**, **Alarm Recording(A)**, **Motion Detection and Alarm Recording** buttons, and then click or select an area on the grid.

b To select the entire day or hour in each day, click the day grid or the hour grid.

8 Click **Finish** to complete the setup.

Note:

1 If your camera model is not listed, you can select a similar model or choose **User Define** and enter the camera's image source path. The source path must be set correctly for the camera to obtain images. Please consult the camera's manufacturer for the camera source path.

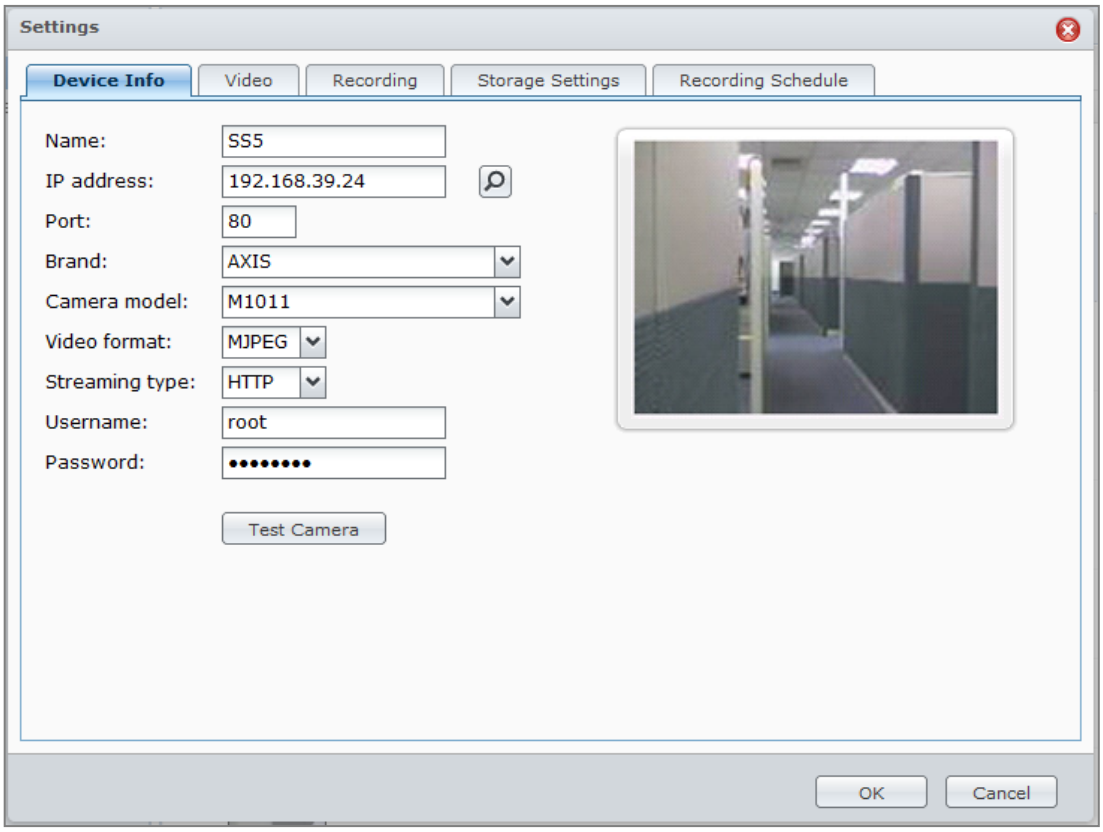
2 In MPEG4 format, Surveillance Station supports audio streaming in both Live View and video recording. The audio support is only available when the IP camera is equipped with audio function.

3 Surveillance Station supports two streaming types, HTTP and RTSP. The actual supported streaming type depends on the camera capability.

4 The frame rate should be set appropriately for the best recording performance.

5 Only UPnP compatible cameras will be found when **Search Camera** is clicked.

Edit Camera and Recording Settings



To edit camera settings:

1 Choose the camera you want to change settings, and click **Edit** > **Settings**. Or you can double-click the camera to change its settings.

2 Edit the settings in **Device Info**, **Video**, **Recording**, **Storage Settings**, and **Recording Schedule** to preference.

3 Click **OK** to save the changes.

Note: If you edit the camera settings while recording, Surveillance Station will stop recording the current video, and generate a new video according to the new settings.

To set the recording schedule:

1 Choose the camera you want to set the recording schedule, and click **Edit** > **Settings**.

2 Click **Recording Schedule** in the camera settings.

3 Click the **Continuous Recording** button, **Motion Detection Recording** button, **Alarm Recording (A)** button, or **Motion Detection and Alarm Recording** buttons, then click the grid. To select the entire day or hour in each day, click the day grid or the hour grid.

4 If you want to cancel selection, click the eraser icon (Delete) and click the grid you want to cancel selection.

5 Click **OK** to save the changes.

To edit motion detection settings:

1 Select the camera you want to change settings, and click **Edit**.

2 Select **Motion Detection** from the drop down menu.

3 You can live view the camera from the screen on the **Motion Detection** window. The bar next to the screen shows motion detection status. Green means normal and Red means an event is triggered.

4 Choose either **Motion detection by the camera** or **Motion detection by Surveillance Station (MJPEG only)**.

5 If you select **Motion detection by the camera**, enter the value of **Detection sensitivity**, **Threshold**, **Object size**, and **Trigger percentage** (subject to camera's capability). The value percentage range is 1 to 99(%)[1].

6 If you select **Motion detection by Surveillance Station**, enter the value of **Detection sensitivity** value and **Threshold**. The value percentage range is 1 to 99(%)[1].

7 Click **Detection Area** to define the detection area.

8 Click **Apply** and **Yes** to apply the settings into camera or Surveillance Station. You can preview the changes in the screen on the right.

9 Click **Close** to finish.

Note:

1 The level of sensitivity determines whether a camera is quick to respond to slight motion and start recording. You can reach this by setting a high value for detection sensitivity, and a low value on threshold, object size, and trigger percentage.

2 For IP cameras with the video format of MPEG4, if you want to schedule **Motion Detection Recording**, you can only choose **Motion detection by the camera** to define the motion detection area.

3 You can setup maximum 10 detection areas.

To edit the guard settings:

1 Select the camera you want to edit, click **Guard**, and choose **Settings** from the drop-down menu for manual setup. You can also click **Guard** and choose **Wizard** from the drop-down menu to quickly set the guard schedule..

2 To setup preset position manually:

- **a** In **Preset Position** tab, click **Add**.
- **b** Name the preset position.
- **c** Adjust the camera's focus by using the PTZ panel.
- **d** Click **Save** to save the preset position settings.

3 To setup patrol among several preset positions:

- **a** In **Patrol** tab, click **Add** on the left section.
- **b** Name the patrol.
- **c** In the **Preset positions list**, click **Add** to add preset positions into patrol. Adjust the preset positions' sequence by clicking **Up** or **Down**.
- **d** Select **interval** to indicate the time a camera should stay on each preset position.
- **e** Click **Preview** to preview patrol.
- **f** Click **Save** to save the settings or click **Reset** to clear the settings.

4 To setup guard by scheduling the patrols:

- **a** In **Guard** tab, select the patrol from the drop-down menu.
- **b** Select the trigger event among **Continuous**, **Motion Detection**, **Alarm**, or **Motion Detection and Alarm**.
- **c** Set up the action plan by selecting the patrol items and **Loops per cycle**. If you choose **Continuous** mode in the previous step, select the interval between each cycle.
- **d** Click or drag a time range on the schedule grid. To select the entire day or hour in each day, click the day grid or the hour grid.
- **e** Repeat the steps to add other patrol settings onto the schedule.
- **f** If you want to cancel selection, click **Delete** and click the grid you want to cancel selection.
- **g** Click **Save** to save the changes. Or you can click **Reset** to clear all settings.
- **h** Click **Close**.
- **i** You can also click **Guard** and choose **Wizard** from the drop-down menu to quickly set the guard schedule.

Note: Preset position, patrol, and guard are only available to cameras that support the functions.

To remove cameras:

Choose the cameras you want to remove (press and hold Shift or Ctrl while making multiple selections), and click **Delete**.

> ***Note:*** Removing cameras will remove both the camera settings and recorded videos.

To disable cameras:

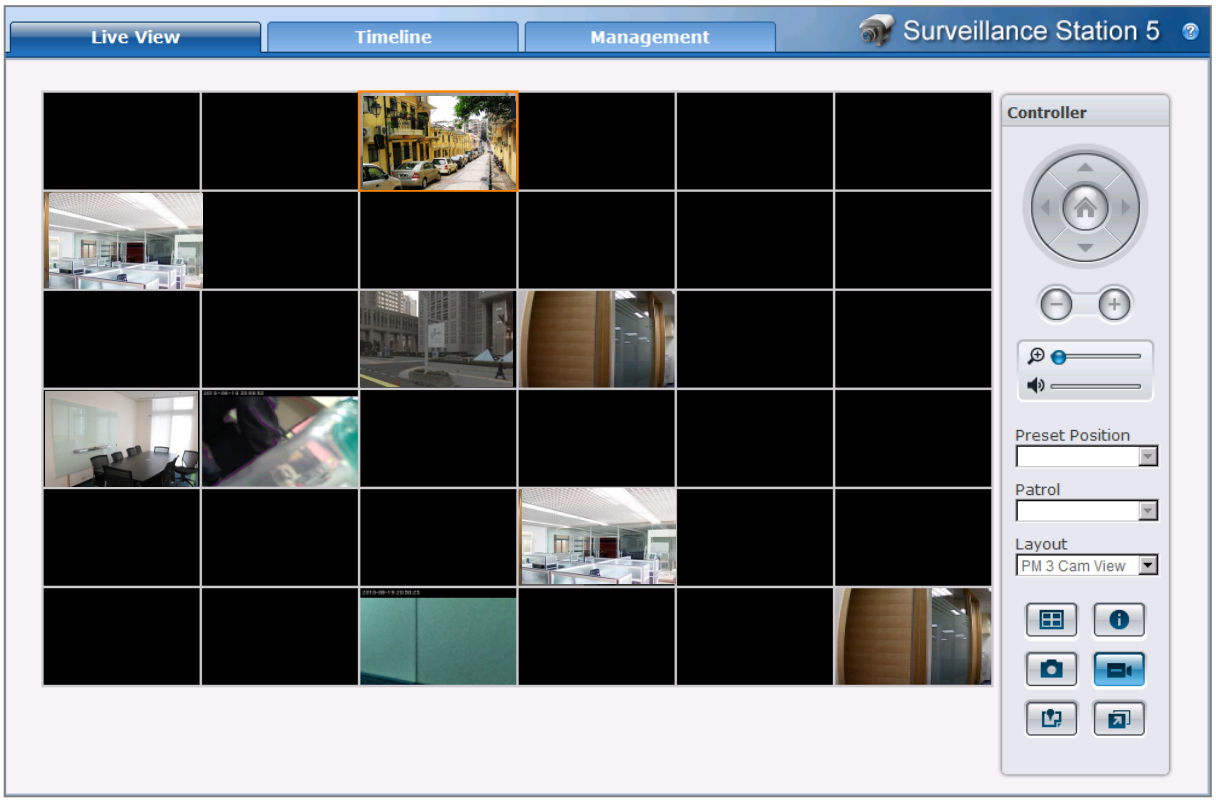
Choose the cameras you want to disable (press and hold Shift or Ctrl while making multiple selections), and click **Disable** in the **Enable** drop-down menu. Doing so will not delete the camera settings and recorded videos.

To enable cameras:

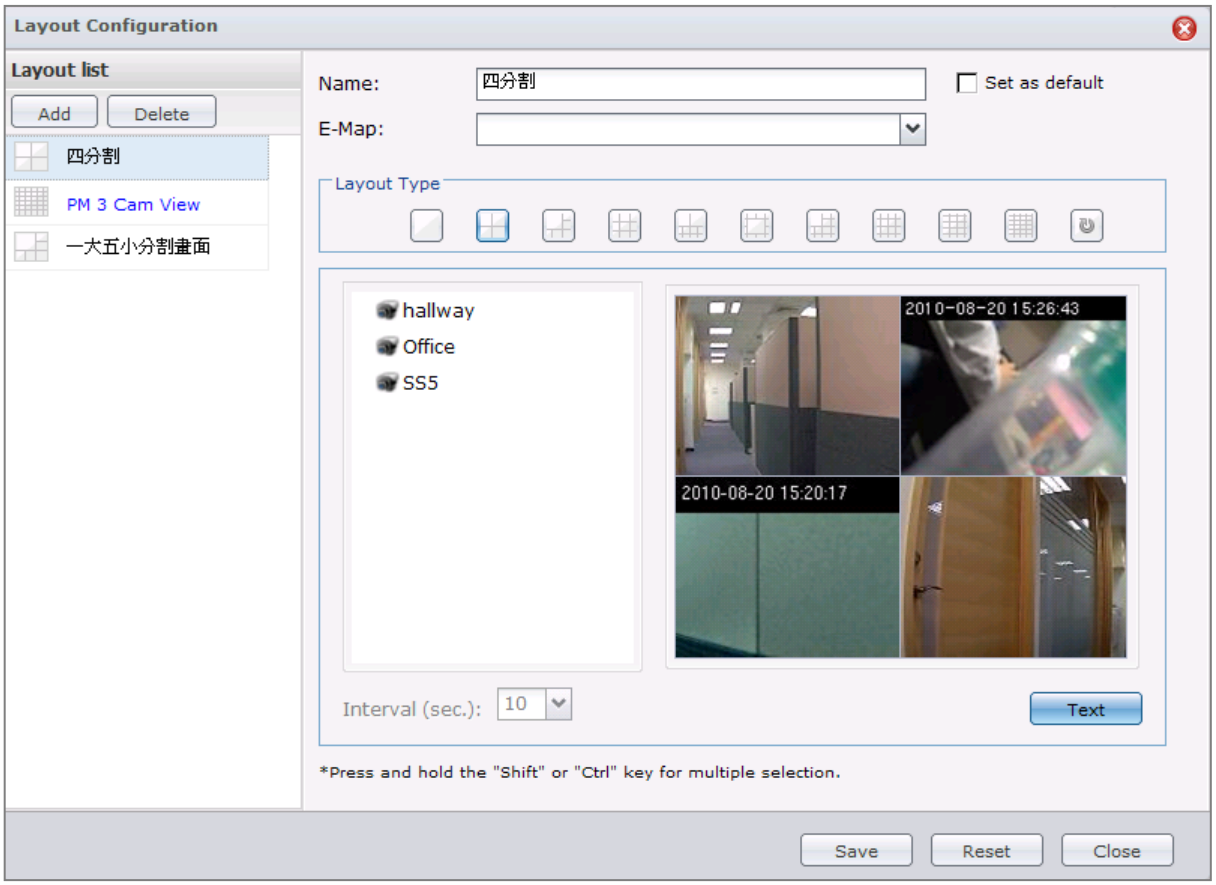
Choose the cameras you want to enable (press and hold Shift or Ctrl while making multiple selections), and click **Enable** in the **Enable** drop-down menu.

Watch Live View

The **Live View** page displays real-time videos of all configured cameras. With Surveillance Station, you can perform various functions, from the basic PTZ (Pan/Tilt/Zoom) and snapshot features to the e-map and manual recording functions.



Configure Layout



The administrator can configure layout setting using Internet Explorer. To customize how the live view will be displayed, click on **Configure** and follow the steps below:

1 **Add** a new layout or click on an existing layout to edit.

2 Enter a layout name.

3 Select the corresponding E-Map. If you select **None**, the **E-Map** button will be disabled.

> ***Note:*** For more information about E-map, see "Use E-Map" on Page 147.

4 Select a type of layout. If you have selected sequential layout, You can adjust the speed of camera rotation at the **Interval** drop-down menu.

5 Drag cameras from the camera list to the preferred layout position, or drag cameras back to the camera list to remove them from the layout.

6 If you have added clients in **Centralized Management**, you can add cameras from your local DiskStation or from other sources by selecting options from **Server**.

7 To see a snapshot of the current layout, click **Preview**. If you would like to set the current layout as the default page when you enter live view, check **Set as default**. Finally, click **Save**.

8 To delete an unwanted layout, select from the layout list and click **Delete**.

9 Click **Close** when finished.

Use PTZ Control

If your camera has PTZ (pan/tilt/zoom) support, you can select a camera and use the **Controller** panel to adjust the camera's direction. Clicking on the home button will restore the camera back to its original position. If you have selected a camera with partial PTZ support, the unsupported functions on the **Controller** panel will be grayed out.

Note:

1 Depending on the performance of your video card, the live view may not display if the video resolution exceeds the supported range. Changing the **Video Output Module** from **DirectX** to **OpenGL** at **System** > **Advanced** under **Management** can sometimes solve the problem.

2 To watch live view of Surveillance Station via internet, please make sure that you have set up proper port forwarding for MPEG4 streaming ports on your NAS server. Refer to **System** > **Advanced** under **Management** for the range of MPEG4 streaming ports.

3 Audio output requires the following audio format: G.711, G.726, AAC, and PCM.

Use Other Functions

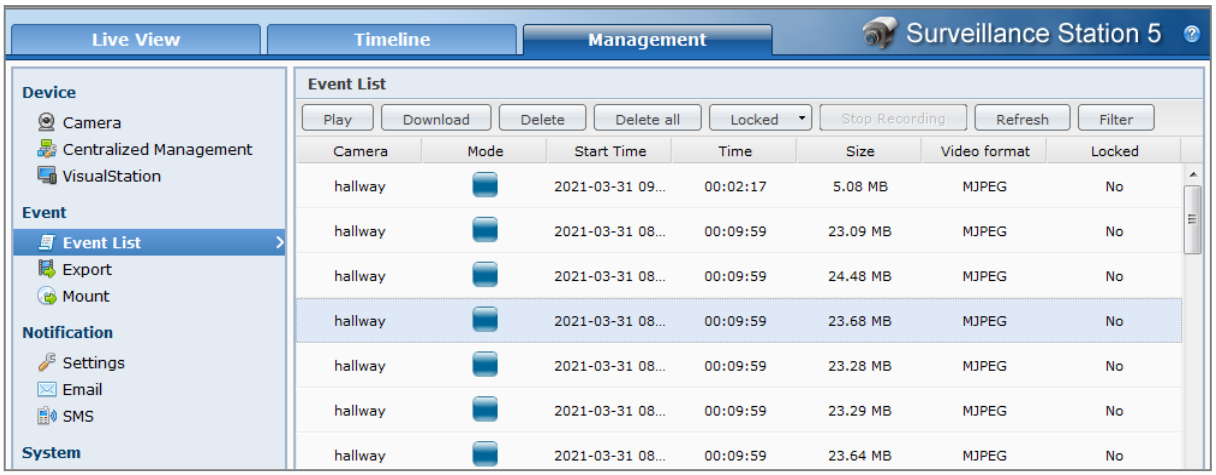
On the **Live View** page, you can also use the following functions:

- To digitally zoom in and out, drag the zoom bar or place the mouse over the live view of a selected camera and then scroll the mouse. You can also zoom digitally by using the scroll button on your mouse, and move by dragging the picture.
- To adjust volume, drag the volume bar.
- To see the corresponding preset or patrol, click on the **Preset Position** or **Patrol** list.
- To save the current image, click on the **Snapshot** button.
- To start manual recording, click on the **Manual Recording** button.
- To see the corresponding E-Map, click the **E-Map** button.
- To see the live view in full screen mode, click the **Full Screen** button.
- Click on **Show information**, and the status for each camera will be displayed on the corner of each live view window.

Note: Non-Internet Explorer browsers support limited functions only.

Record and Manage Events

Under the **Management** tab, you can go to **Event** > **Event List** to browse all recorded events, play them with the Event Player[1], and delete or download the video files.



About Events

All recorded events will be here. The events are displayed with the latest ones on top. The images displayed under **Mode** correspond with the type of recording the event was filmed under.

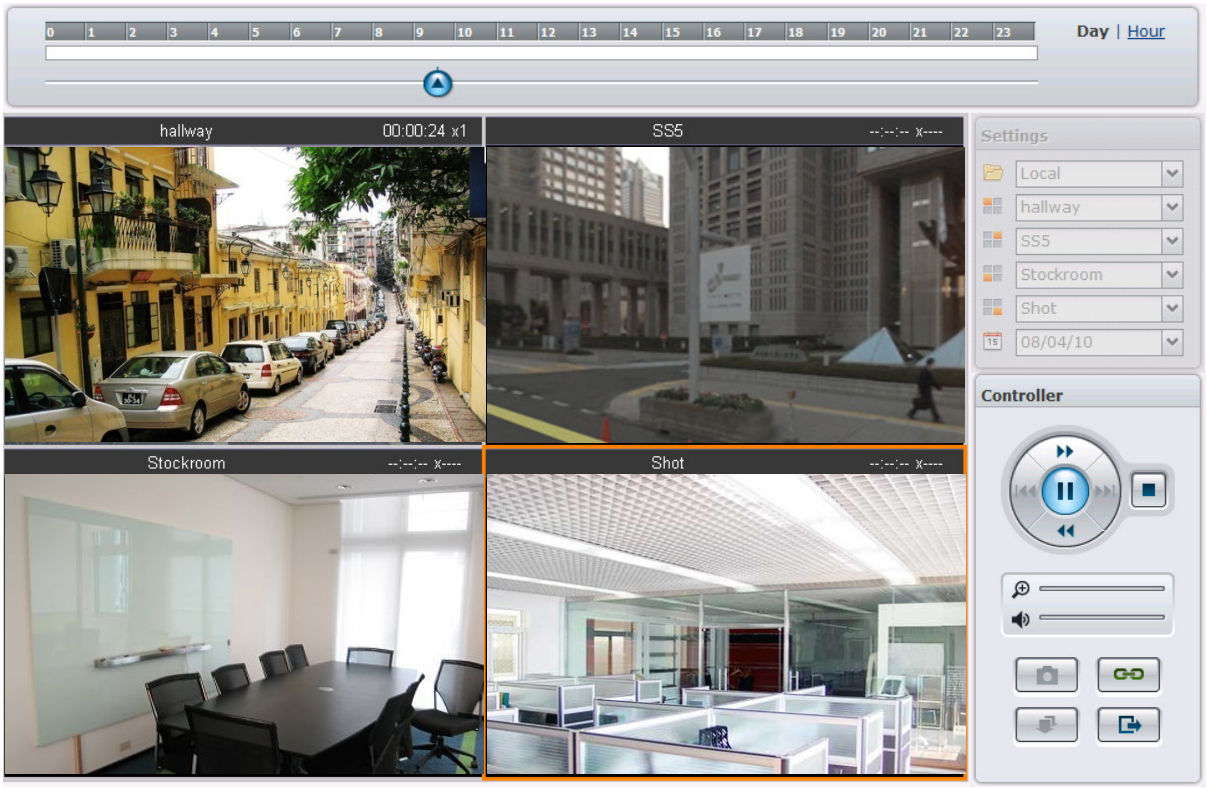
- The **gray** icon represents **Continuous Recording**
- The **blue** icon represents **Manual Recording**
- The **green** icon represents **Motion Detection Recording**
- The **orange** icon represents **Alarm Recording**

- The green/orange icon represents **Motion Detection and Alarm Recording**

> ***Note:*** Your IP camera must support alarm recording to be able to use **Alarm Recording**. Alarm recording often relates to the IP camera's digital input and output pin, or DIDO. Refer to its datasheet for pin configuration detail. Alarm recording will begin when the IP camera detects an input pin is triggered.

Playback Events with Timeline

Click the Timeline tab to see the timeline page, which offers the Multiple-Event Playback function[1], allowing you to simultaneously watch events recorded on one day or at the same time by different cameras. All event videos are lined up in the timeline. You can easily find the event you are looking by clicking a specific time on this day or during the hour, and play it with the event player on this page.



In the timeline, events recorded in **Continuous Recording** mode will be displayed in gray, **Motion Detection Recording** mode will be displayed in green, and **Alarm Recording** mode will be displayed in orange.

You can click **Day** or **Hour** on the right side of the timeline to easily find an event recorded on this day or during the hour.

To select an event source:

If you have added clients in **Centralized Management**, or have mounted exported archives, you can play the events from your local DiskStation or from other sources.

To find events on the timeline:

1 On the **Controller** panel, click the **Sync mode** or **Non-sync mode** button to switch between sync or non-sync playback.
   - **Sync:** Allows you to play multiple events recorded at the same time.
   - **Non-sync:** Allows you to play multiple events on the same day sequentially without waiting.

2 On the **Settings** panel, do the following:
   - **a** Choose **Local** to play events from your local DiskStation, or choose other sources to browse their events.
   - **b** Click the calendar icon to specify the date[2].
   - **c** Choose individual cameras from the four camera drop-down menus[2].

3 Move the **cursor icon** to where you want to start watching the events. You can click **Day** or **Hour** to display the timeline within 24 hours or within 1 hour.

To play, download, export events, or take snapshots:

1 Click the **Play** button on the **Controller** panel start playing the events.

2 In the non-sync mode, click the **Previous** button or **Next** button on the **Controller** panel to go to the previous or next event.

3 To take a snapshot, you can pause the player, and then click the **Snapshot** button to save the image.

4 Drag the digital zoom slider on the **Controller** panel to zoom in or out digitally. Dragging to the left end will return to the normal zoom level, while dragging to the right will zoom in digitally. You can also zoom digitally by using the scroll button on your mouse, and move by dragging the picture.

5 Adjust the volume by dragging the slider bar on the **Controller** panel if the selected event has audio support.

6 Click the **Stop** button to stop playing the event.

7 Click **Download** to download the selected event.

8 Click **Export** to export all events recorded on the day by the selected camera.

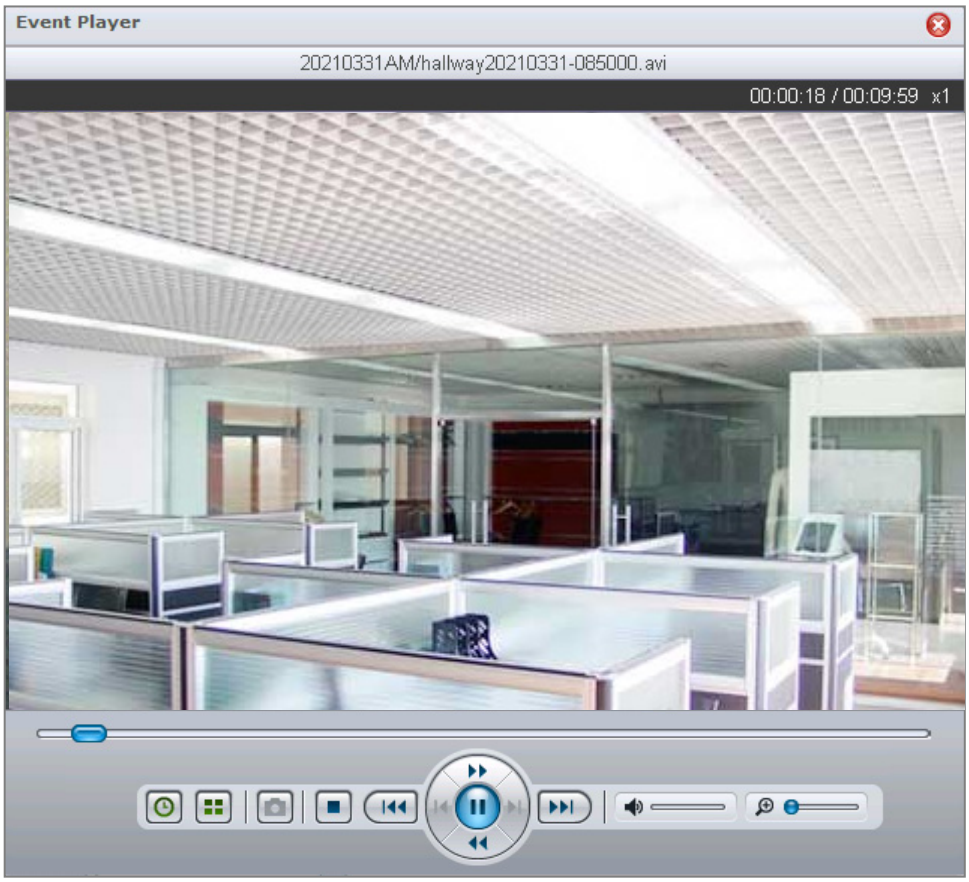
Note:

1 Supported on Internet Explorer only.

2 During event playback, you are not allowed to choose from the camera drop-down menu or click the calendar icon to change the date.

Edit Events

Go to **Event** > **Event List** under **Management** to edit your events.



To play an event with the Event Player:

Choose the event you want to play, and click **Play**. Or you can double-click the event to activate the **Event Player**.

More Information

After the Event Player is opened, you can take the following operations:

- Click the **Play** button on Event Player's **Controller** panel to play the event.
- To go to the previous or next event, click the **Previous** button or **Next** button on the **Controller** panel.
- To take a snapshot, you can **Pause** the current event, click the **Previous frame** or **Next frame** button on the **Controller** panel, then click the **Snapshot** button [2] to save the image.
- To adjust the volume, drag the slider bar [2] on the **Controller** panel. The far left of the bar is the minimum volume, while the far right is the maximum volume.
- Drag the digital zoom slider [2] on the **Controller** panel to zoom in or out digitally. Dragging to the left end will return to the normal zoom level, while dragging to the right will zoom in digitally. You can also zoom digitally by using the scroll button on your mouse, and move by dragging the picture.
- Click the **Stop** button to stop playing the event.
- Click the **Time Slicing** button to slice the video into 4 segments, which will be played simultaneously. This function is only available when the video length is longer than 1 minute.
- Click the **Duration / Timestamp** button to switch between displaying the length of the video and displaying the time when the video is recorded.

To lock events:

Choose the event(s) you want to unlock[3], and click **No** in the **Locked** drop down menu.

You can lock the events to avoid them being deleted by the archive rotation mechanism or the delete button. To lock events, choose the event(s) you want to lock[3], and click **Yes** in the **Locked** drop down list.

To delete an event:

Choose the event(s) you want to delete[3], and click **Delete**.

To delete all events:

To delete the events in all pages, you can just click the **Delete all** button.

To download an event:

To download the video clip of an event, choose the event you want to download. Click **Download** and choose the saving destination. The video clip will be saved in .avi or .mp4 format.

To stop recording immediately

To stop the current event recording immediately, choose the current recording event and click **Stop Recording**.

To filter events:

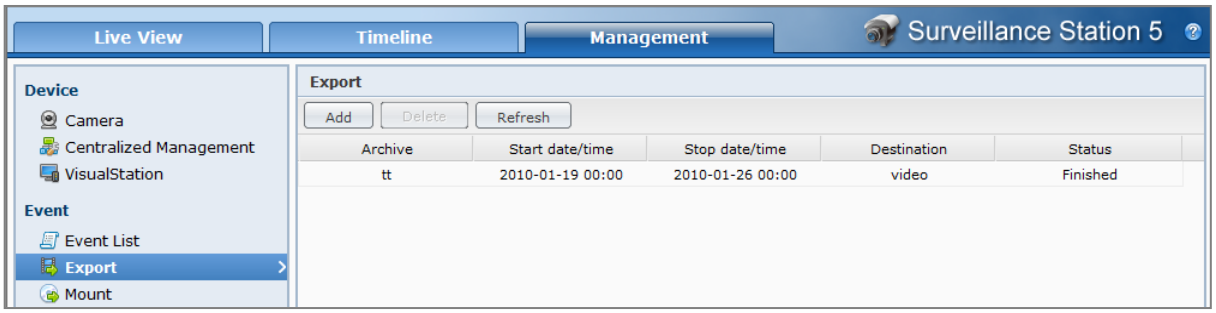
You can click the **Filter** button, and then specify the criteria to find specific events you want to watch. If you have added any client server at **System** > **Advanced** > **Centralized Management**, or if you have used the **Mount** function to mount events onto your Surveillance Station, you can use the **Source** drop-down menu to play events recorded by any other DiskStation.

Note:

1. MPEG4 format can only be played by Internet Explorer.
2. Supported on Internet Explorer only.
3. You can press "Ctrl" or "Shift" for multiple selections.
4. Your IP camera must support alarm recording to be able to use this function. Alarm recording often relates to the IP camera's digital input and output pin. When the IP camera is triggered by an input signal, it will send a signal to DiskStation to begin alarm recording. Refer to the IP camera's datasheet for pin configuration detail and how to setup its input pin sensor.

Export Events

Go to **Event** > **Export** under **Management** to export the events. You can export events from Surveillance Station to any shared folder or to an external storage device via USB or eSATA interface.



By specifying the camera and time frame, the events within the range will be exported as an archive.

To export an archive:

1 Click **Add**.

2 Name the archive and select a destination. Click **Next**.

3 Select the cameras which events are to be exported. Click **Next**.

4 Select the date and time range of the events to be exported. Click **Finish** to export.

To delete an archive:

Choose the archives you want to remove, and click **Delete**. (Press and hold Shift or Ctrl while making multiple selections.)

This action will only remove the archive from the list. The original event files and the exported archives will not be deleted.

Mount Events

Go to **Event** > **Mount** under **Management** to mount exported events. You can mount exported archives onto Surveillance Station. The events in the mounted archive can be played in **Event Management** and **Timeline** page.

To mount an archive:

1 Click **Add**.

2 Select a source from the **Source** drop-down menu.

The source can be any shared folder or an external storage device via USB or eSATA interface.

3 The system will list out all the exported archives stored in the source. Select the archives, click **OK** to mount.

> ***Note:*** The same archive cannot be mounted twice.

To delete a mounted archive:

Choose the archives you want to remove, and click **Delete**. (Press and hold Shift or Ctrl while making multiple selections.)

This action will only remove the archive from the list. The original event files and the exported archives will not be deleted.

To enable/disable mounted archives:

1 Select the archive you would like to enable/disable. (Press and hold Shift or Ctrl while making multiple selections.)

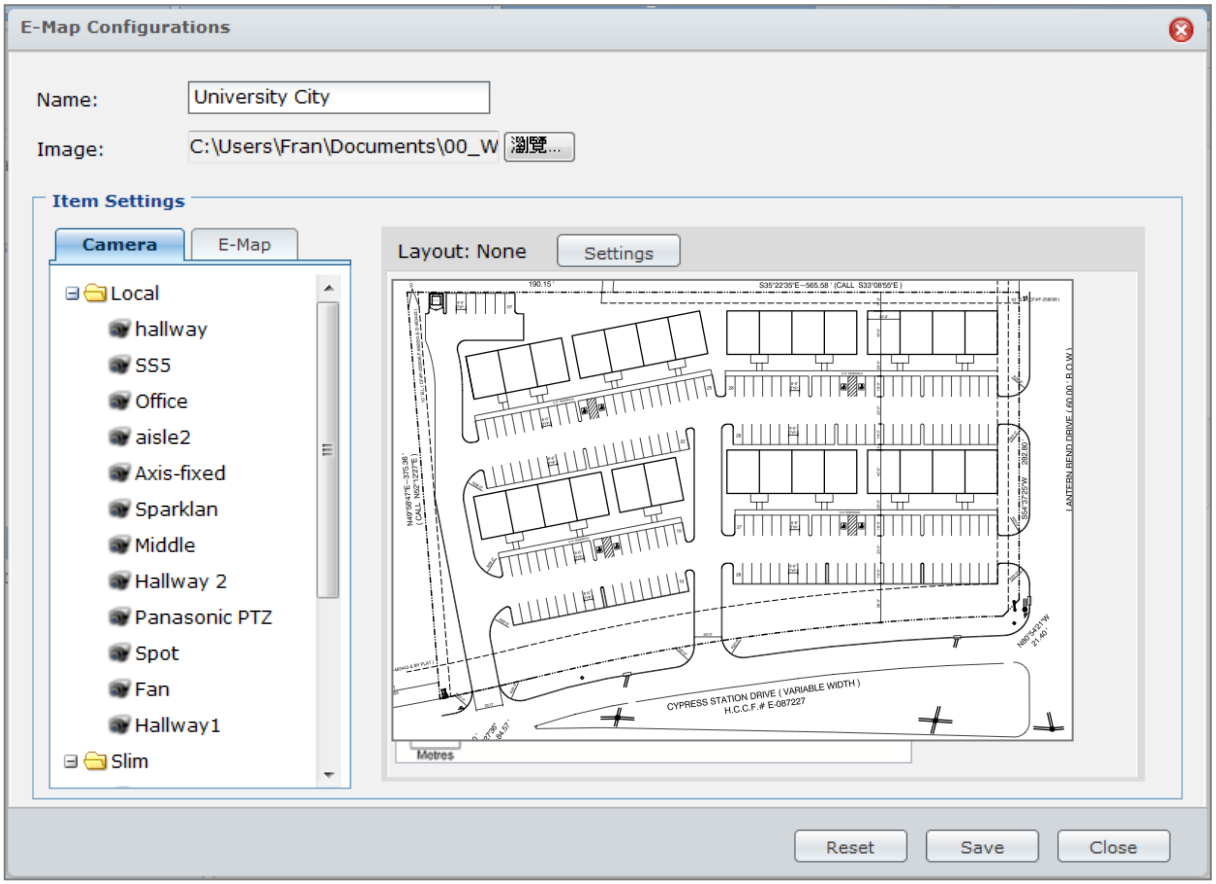
2 Click on the **Enable** button on the top of the page.

3 Select **Enable** or **Disable**.

> ***Note:*** The **Source** drop-down menu in **Management** and **Timeline** page will not display disabled archives.

Use E-Map

You can add, edit, and delete E-Maps at **System** > **E-Map** under **Management**.



To add an E-Map:

1 Click **Add**.

2 Name the E-Map.

3 Click **Browse** to locate the image file and upload the file.

4 The image will be displayed in the **Items Settings** area when the transmission is complete.

5 Click **Settings** next to **Layout**. In the window that appears, Tick the layout(s) where you want to apply the E-Map, and then click **OK**.

6 On the uploaded E-Map image, you can arrange camera positions, or add other E-Maps links:

- From the **Camera** or **E-Map** tab, drag the items you would like to place onto the uploaded image. Double-click any camera on the map to change its direction.
- To remove any item, drag the item out of the E-Map. The removed item will return to **Camera** or **E-Map** list.

7 Click **Save** to save the changes. To undo all setting modifications, click **Reset**.

8 Click **Close** to close the **E-Map Configurations** window.

To edit E-Map settings:

1 Select the E-Map you want to edit, and click **Edit**. Or you can double-click on the E-Map to open the **E-Map Configurations** window.

2 Modify the name, re-upload the image, and arrange items to update the settings.

3 Click **Save** to save the changes.

4 Click **Close** to close the **E-Map Configurations** window.

To remove E-Maps:

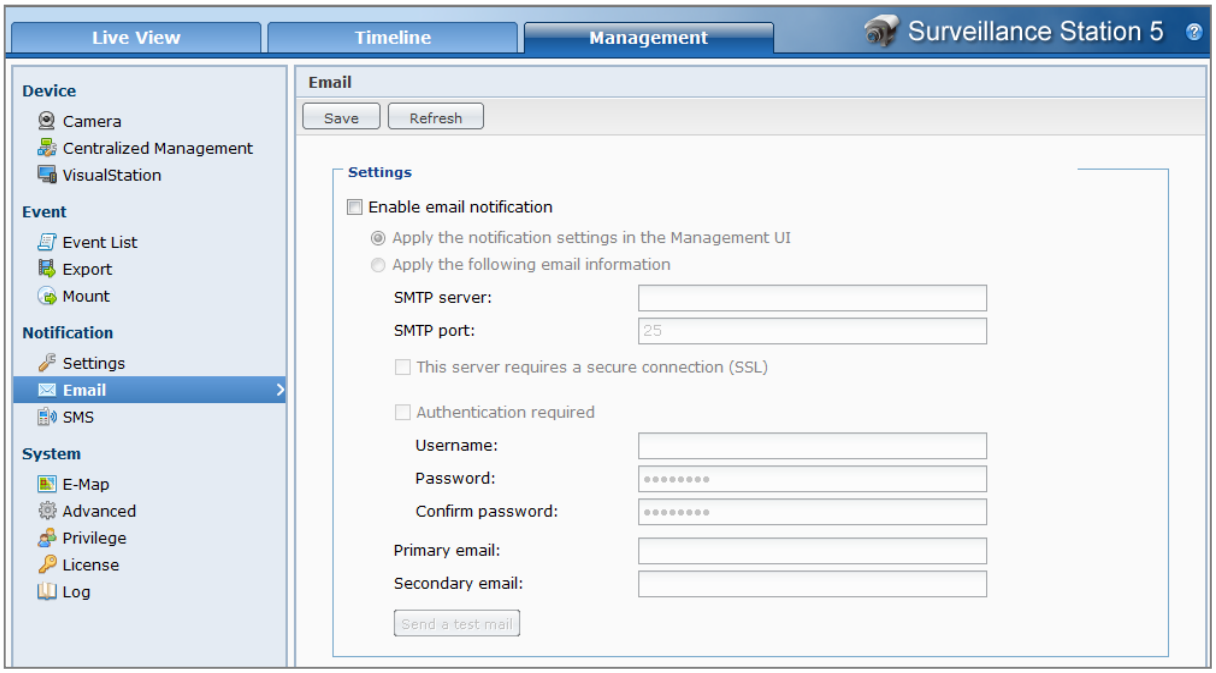
Select the E-Maps you want to remove, and click **Delete**.

Note:

- The recommended image dimension is 480 x 320. Any Image with larger dimension will be resized to fit in the dimension, with its aspect ratio maintained.
- Supported image formats: BMP, JPG, JPEG, GIF, PNG

Receive Email or SMS Notification

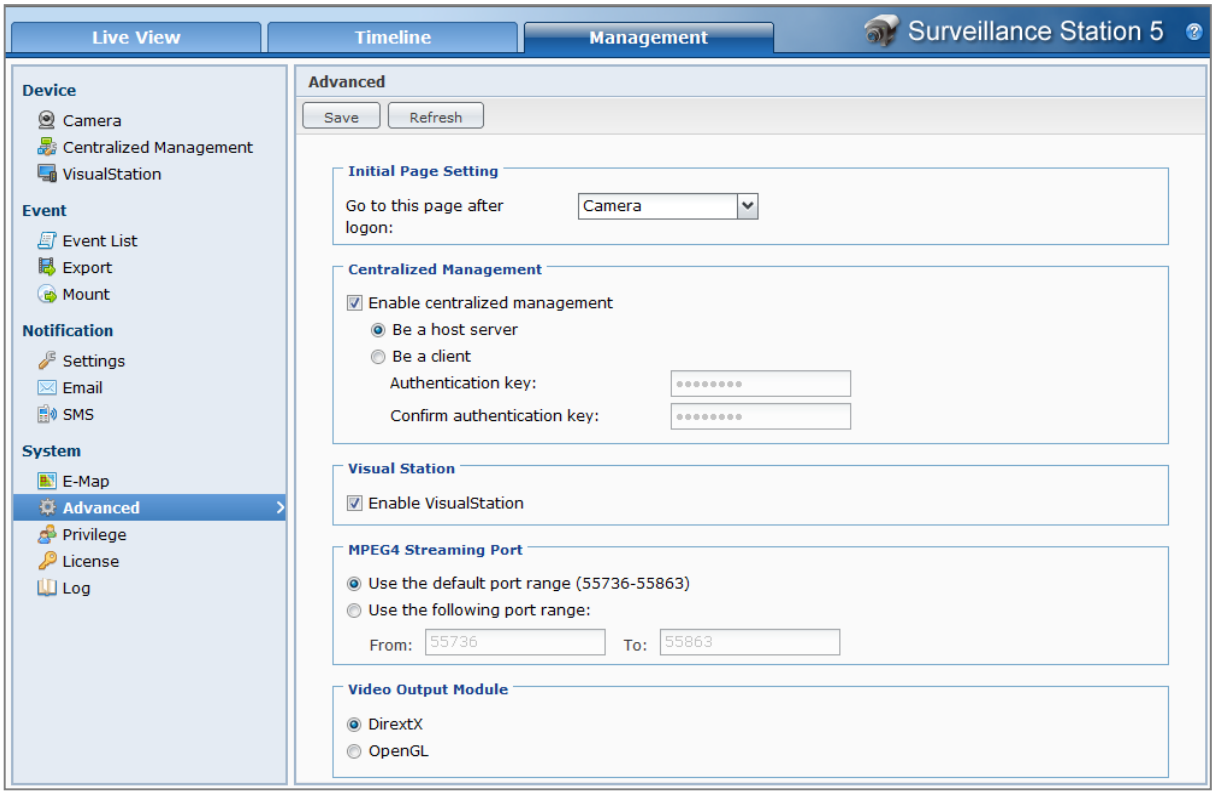
You can set up email or SMS notification in order for Surveillance Station to send you a system notification by email or by SMS messages. You can decide which types of event to be notified at **Notifications** > **Settings** under **Management**.



Note: For more information about setting up Email or SMS notification, go to **Notification** > **Email** or **SMS** under **Management** and see their help pages by clicking the **Help** button (with a question mark) at the top-right corner.

Manage Advanced Settings

Go to **System** > **Advanced** under **Management** to manage the advanced settings for Surveillance Station.



Initial Page Setting[1]

You can choose from the drop-down menu to set the initial page after logging in to Surveillance Station.

Centralized Management[1]

Centralized management allows a host server to see the live view and recorded events of other clients through **Live View** or **Event Playback** page.

To set your DiskStation as a client:

Tick **Enable centralized management**, choose **Be a client**, and then enter an **Authentication key** and confirm the key in the **Confirm authentication key** field.

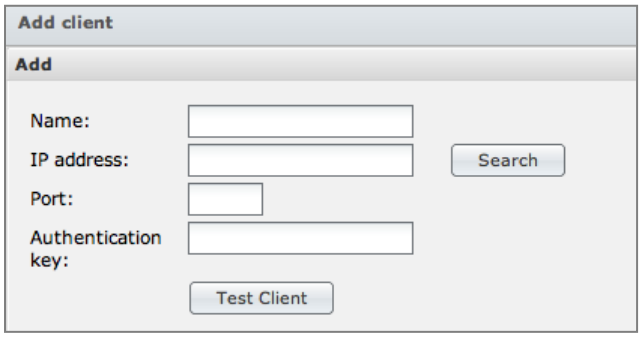
The host server will be required to enter the correct key to log in and watch the live views and recorded events on your DiskStation.

To set your DiskStation as a host server:

1 Tick **Enable centralized management** and then choose **Be a host server**.

2 Go to **Device** > **Centralized Management** and click **Add**.

3 Name your client, enter its IP address, port number, and authentication key (5000 by default), and then click **Test Client**.



4 If the values are correct, a dialog will appear to tell you the connection is successful. Click **OK** to close the dialog.

Now you can see the live view and recorded events of the client through **Live View** or **Event Playback** page

VisualStation[1]

Tick **Enable VisualStation** to manage the VisualStation with your DiskStation. With VisualStation, you can see the live view of the cameras on a TV set or LCD monitor directly without using a computer. A VisualStation can only be managed by a DiskStation within the same LAN.

MPEG4 Streaming Port Range[2]

1 The default port range for MPEG4 video streaming is 55736-55863. You can set it from 1025 to 65535, excluding the following numbers:
3306, 3689, 5335, 5432, 7000, 7001, 8080, 8081, 9997, 9998, 9999, 50001, 50002, 55536-55663, 6881-6890.

2 The port range must include sufficient number of ports for MPEG4 video streaming, and can include up to 128 ports.

Video Output Module

When DirectX is set as the video output module, live view or events might not display correctly with some computers due to video card performance. This problem may be fixed by using OpenGL instead.

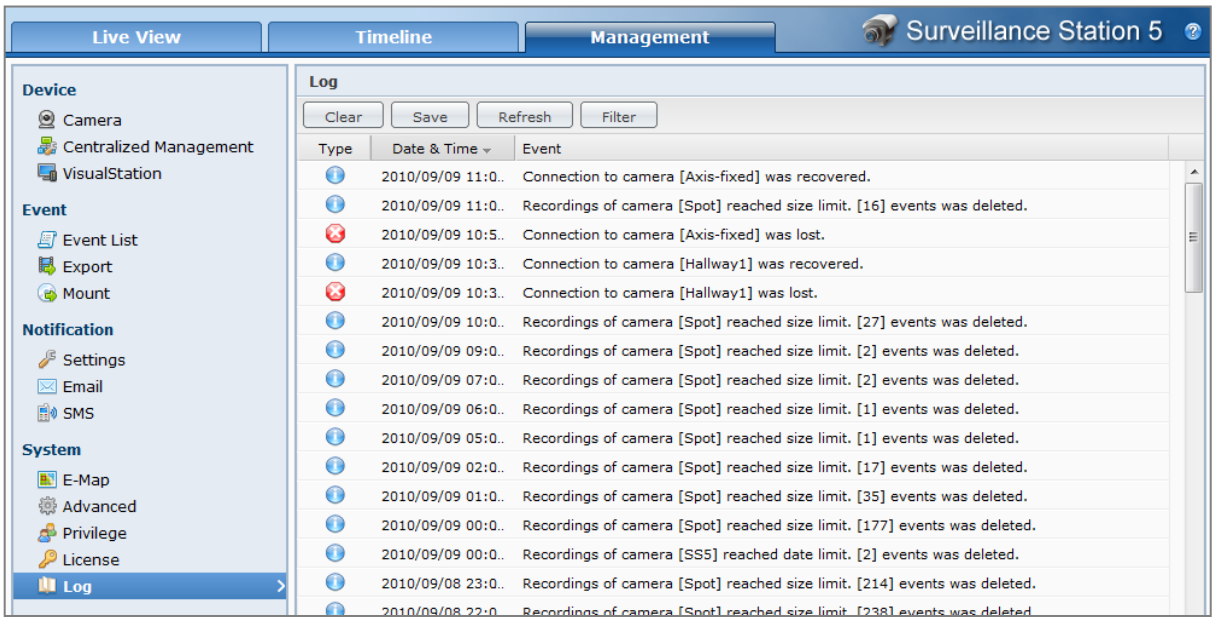
Note:

1 Only editable by the admin.

2 After the port range is modified, all live views will be interrupted and reactivated.

View Log

Go to **System** > **Log** under **Management** to see critical events such as camera disconnection or changes on the camera settings. You can view the logs and manually delete/save the log for further use.



To delete the log:

1 Click the **Clear** button.

2 Click **Yes** to finish.

To save the log:

1 Click the **Save** button.

2 In the prompt window, select whether to open the exported log or to save the file.

3 Click **Save** to finish.

> ***Note:*** The maximum size for the logs is 64KB. When the size reaches its limit, the system will automatically delete the oldest log in order to make more space for newer logs.

To filter the log:

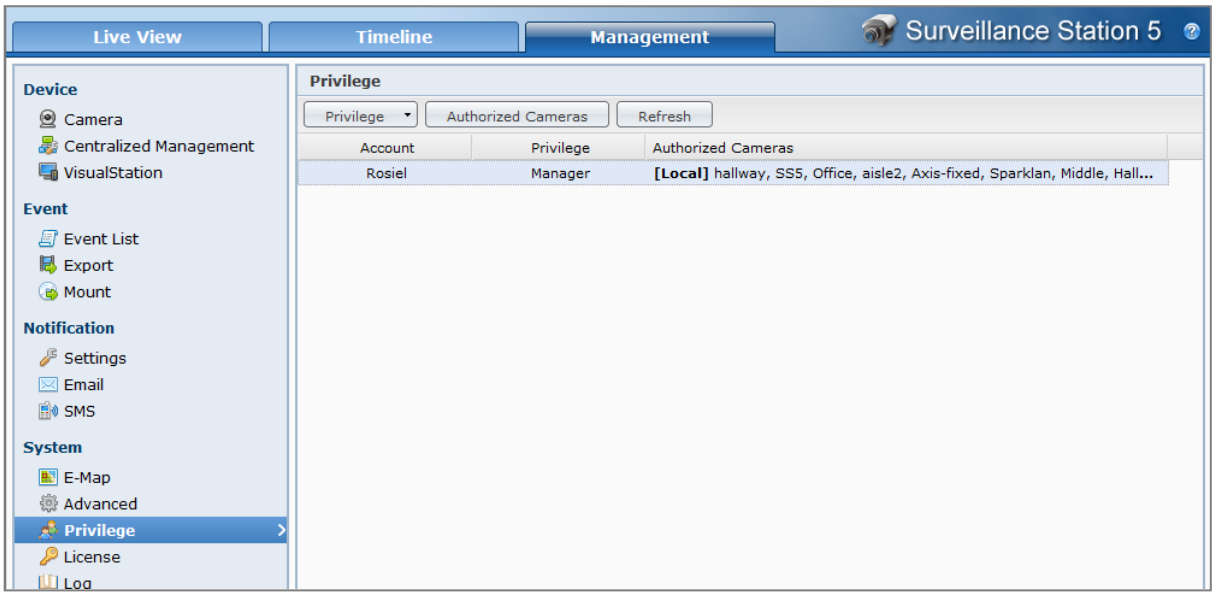
1 Click the **Filter** button.

2 In the dialog that appears, specify the criteria to find specific log you want to watch.

3 Click **OK**.

Assign Privilege

Go to **System** > **Privilege** under **Management** to assign the privileges for Synology DiskStation users. **Admin** has full authority on Surveillance Station and can assign different privileges to local users on DiskStation. **Manager** can manage all functions except license management. **Spectator** can only watch live view and event playback but cannot edit camera settings.



To change users' privilege:

1 Select the accounts you want to manage. (Press and hold Shift or Ctrl while making multiple selections.)

2 Click **Privilege** and select **Manager** or **Spectator** according to your need.

To authorize cameras:

1 Select the accounts you want to manage. (Press and hold Shift or Ctrl while making multiple selections.)

2 Click **Authorized Cameras**.

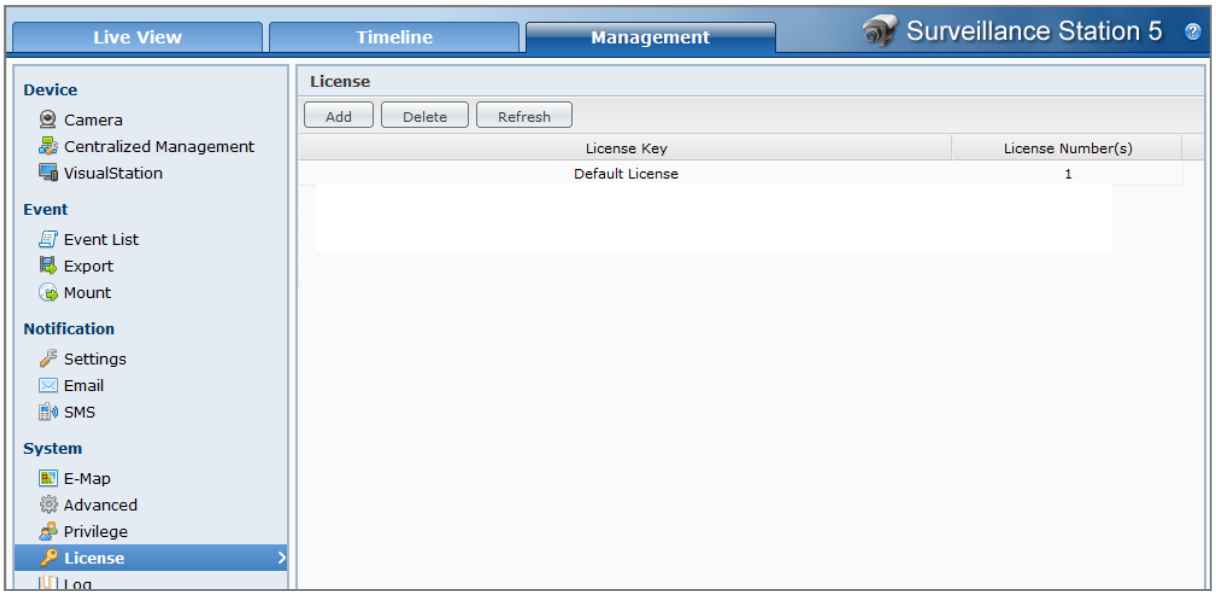
3 Tick the checkbox to authorize camera.

4 Click **OK**.

Note: Admin should first assign the privileges to the users who can access Surveillance Station at **Main Menu** > **Control Panel** > **Application Privileges** of the DSM management UI. Afterward Admin can change their login privilege.

About Camera License

Go to **System** > **License** under **Management** to manage camera license. Each DiskStation comes with one camera license. For DiskStation models that support multiple cameras, you can purchase **Synology Camera License Packs** to install additional cameras.



To install a camera license:

1 Click **Add**.

2 Select **Agree** if you have read and agreed with the Terms and Conditions.

3 Enter the license key of your purchased license.

4 Click **OK**.

To delete camera licenses:

1 Choose the license you want to delete, and click **Delete**.

2 Click **OK** in the prompt dialogue window.

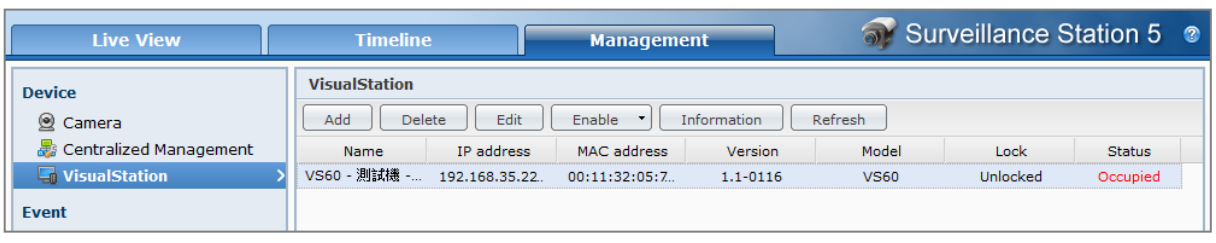
Note:

- One camera license is provided and installed by default for you to use Surveillance Station. It is not possible to delete the default license.
- Unlike the supported camera number, there is no limit on the number of installed camera licenses. For the supported camera number, see "Appendix A: Synology DiskStation Specifications" on Page 174.

Use VisualStation

Go to **System** > **Advanced** under **Management** and tick **Enable VisualStation** to manage VisualStation from Synology DiskStation. With VisualStation, you can see the live view of the cameras on a TV set or LCD monitor directly without using a computer. A VisualStation can only be managed by a DiskStation within LAN.

After VisualStation support is enabled, you can add a VisualStation within LAN and manage its settings.



To add a VisualStation:

1 Click on the **Add** button.

2 The search result will show all the VisualStations within the network. Select the VisualStation that you would like to pair. Make sure the status of the VisualStation is **Unlocked**.

3 Click on **Next** to continue to Network Settings.

- Create a name for the VisualStation.
- Define LAN configuration.

4 Click on **Next** to continue to Camera Settings.

- Select VisualStation's channel layout. The selected setting will be reflected on the preview area below.
- All the cameras added on the Surveillance Station are also listed on this page. Select the camera you would like to show on VisualStation, and drag to the preview area.

5 Click on **Finish** to save the settings.

6 Press and hold the **Lock** button on the VisualStation unit for 3 seconds. The LED light will glow solid green when its status is changed to **Locked**.

To edit the settings of a VisualStation:

1 Select the VisualStation you would like to edit. Double click on it or click on **Edit** to proceed.

2 Edit the corresponding settings.

3 Click on **Save** to finish.

To enable/disable a VisualStation:

1 Select the VisualStation you would like to enable/disable.

2 Click on the **Enable** button on the top of the page.

3 Select **Enable** or **Disable**.

> ***Note:*** Disabling VisualStation will not delete its settings.

To delete a VisualStation:

1 Select the VisualStation you would like to delete.

2 Click on the **Delete** button on the top of the page.

3 Click on **Yes** to finish.

To restore VisualStation to factory default:

1 Press and hold the **RESET** button at the back of the VisualStation until you hear a beep.

2 The status of the VisualStation will appear as **Reset** on the VisualStation list.

To pair the VisualStation with the DiskStation again, you need to delete the entry from the list and add it again. Follow the delete steps and continue with the add process.

Chapter 15

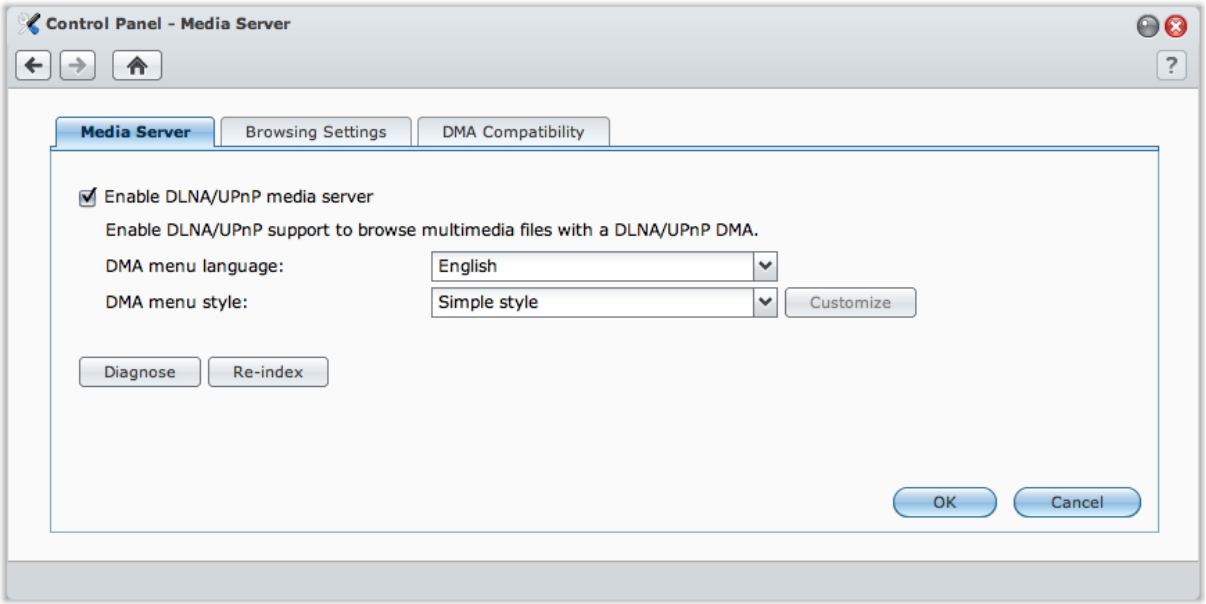
Manage Media Server and iTunes Service

Synology DiskStation can become a multimedia server on the local area network, allowing computers (using Windows Media Player or iTunes) and DLNA/UPnP home devices (such as stereo system or TV set) to play its multimedia contents.

This chapter explains how to stream multimedia contents from Synology DiskStation to your computer or other DLNA/UPnP home devices.

Manage DLNA Media Server

Go to **Main Menu** > **Control Panel** > **Media Server** to enable DLNA/UPnP media server. After it is enabled, users can browse the multimedia contents on Synology DiskStation with a DLNA/UPnP home device, also known as **Digital Media Adapter (DMA)**.



The following shared folders will be accessed by DMA Devices:

- **photo**
- **video**
- **music**

Note: You can play the following multimedia file formats on Synology DiskStation with DLNA/UPnP enabled DMA:

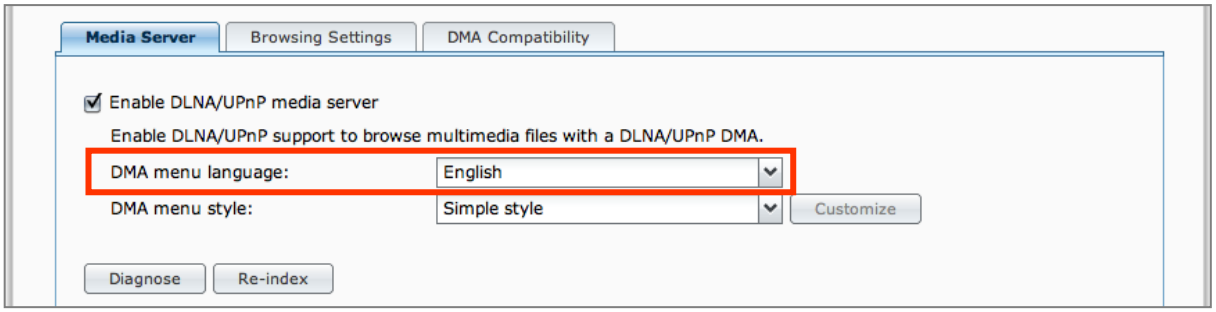
- **Audio:** AAC, FLAC, M4A, MP3, Ogg Vorbis, PCM, WAV, WMA, WMA VBR, WMA PRO, WMA Lossless
- **Image:** BMP, JPG (jpe, jpeg), GIF, ICO, PNG, PSD, TIF (tiff), UFO, RAW (arw, srf, sr2, dcr, k25, kdc, cr2, crw, nef, mrw, ptx, pef, raf, 3fr, erf, mef, mos, orf, rw2, dng, x3f)
- **Video:** 3GP, 3G2, ASF, AVI, DAT, DivX, DVR-MS, ISO, M2T, M2TS, M4V, MKV, MP4, MPEG1, MPEG2, MPEG4, MTS, MOV, QT, SWF, TP, TRP, TS, VOB, WMV, XviD, RV30, RV40, AC3, AMR, WMA3
- **Playlist:** M3U, WPL
- **Subtitles:** srt, psb, smi, ass, ssa, sub, idx, ifo (x07 Series: DSM v2.0.3 - 0451 and onward; x06 Series: DSM v2.0.3 - 0430 and onward)

To enable DLNA/UPnP media server:

Tick **Enable DLNA/UPnP media server** and click **OK**.

Determine the DMA Menu Language and Style

You can decide how to organize your multimedia files on the DMA menu by selecting a predefined menu style or customizing your own. The system can save up to three different sets of customized menu styles.



To determine the DMA menu language:

Choose a language from the **DMA menu language** drop-down menu.

To customize the DMA menu style:

1 Choose one of the three customized styles, and then click **Customize**.

2 Click one of the following tabs: **Music**, **Photo**, or **Video**.

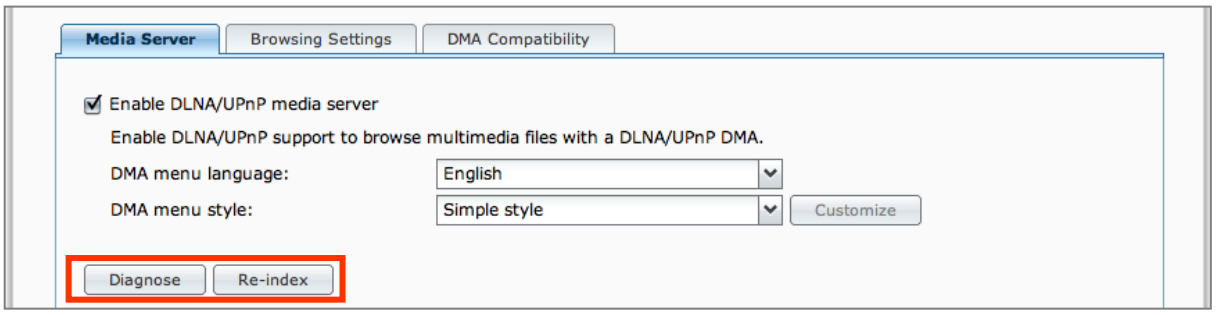
3 Do any of the following:

- **If you want to create a new menu style,** click **Create**. If you have selected **Music**, there will be a list of templates.
- **If you want to edit an existing style,** click **Edit**.

Note: For users to correctly browse the multimedia files on the server, the codepage and menu language you set should be identical with those of the DMA. For more information about setting the codepage, see "Specify Default Languages" on Page 29.

Re-index Media Files

Click **Re-index** to reconstruct the index structure of the multimedia files if you find missing multimedia files while browsing through Synology DiskStation with your DMA device. The process will be executed in the background.



Record Diagnostic Log

The log can help determine the cause of the problem when you contact Synology Support for assistance.

To manage DMA communication log:

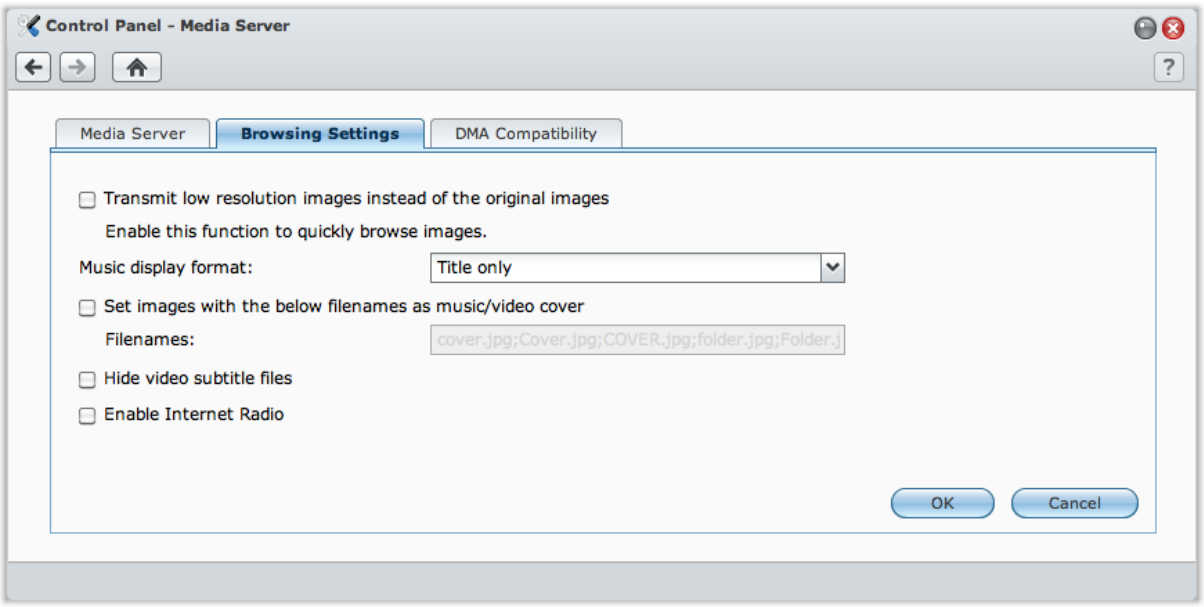
1 Click **Diagnose** and tick **Enable DMA communication log for diagnostic purpose** to start recording the log.

2 You can download or clear the recorded log by clicking **Download** or **Clear**.

3 Click **OK**.

Manage Browsing Settings

In the **Browsing Settings** section, you can manage the browsing settings for DMA.



To quickly browse images:

Tick **Transmit low resolution images instead of the original images**.

To change how your music files will be displayed:

Select a **Music display format** from the drop-down menu.

To set album cover (for music files without an embedded image) or video thumbnails:

1 Tick **Set images with the below filenames as music/video cover**.

2 Enter **Filenames** such as **Cover.jpg**, and the image with the same filename under the same folder as the music files will be displayed as album covers or video thumbnails. The filenames are case sensitive, and the filename listed closest to the front will be used when multiple images are available.

To hide video subtitle files:

Tick **Hide video subtitle files**.

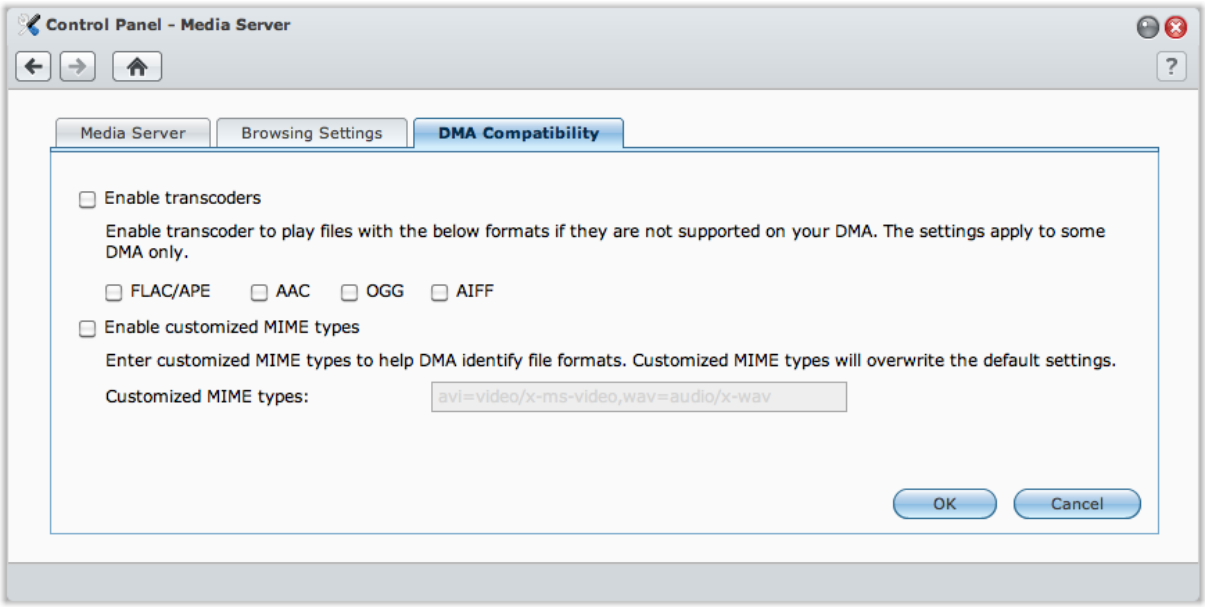
> ***Note:*** Under most circumstances, you can hide video subtitle files while browsing DiskStation media with a DMA device, because only a few DMAs need to browse the subtitle files to have the subtitle function to work correctly.

To browse and play the radio stations listed on Audio Station:

Tick **Enable Internet Radio**.

Enhance DMA Compatibility

In the **DMA Compatibility** section, you can enhance DMA compatibility to make sure the multimedia contents on your DiskStation are played smoothly on your DMA devices.



To enable transcoder Settings:

Tick the following checkboxes to enable transcoders if your DMA does not support the following audio formats: **FLAC**, **APE**, **AAC**, **OGG**, and **AIFF**.

To help DMA identify multimedia file formats:

Tick **Enable customized MIME types** and enter the **Customized MIME types**.

More Information

MIME types, also known as **Internet media types**, can improve the compatibility of multimedia files with DMA by specifying the type and sub-type of media files. You can customize the MIME types to help your DMA device identify the correct file formats.

Play Multimedia Contents with DMA Devices

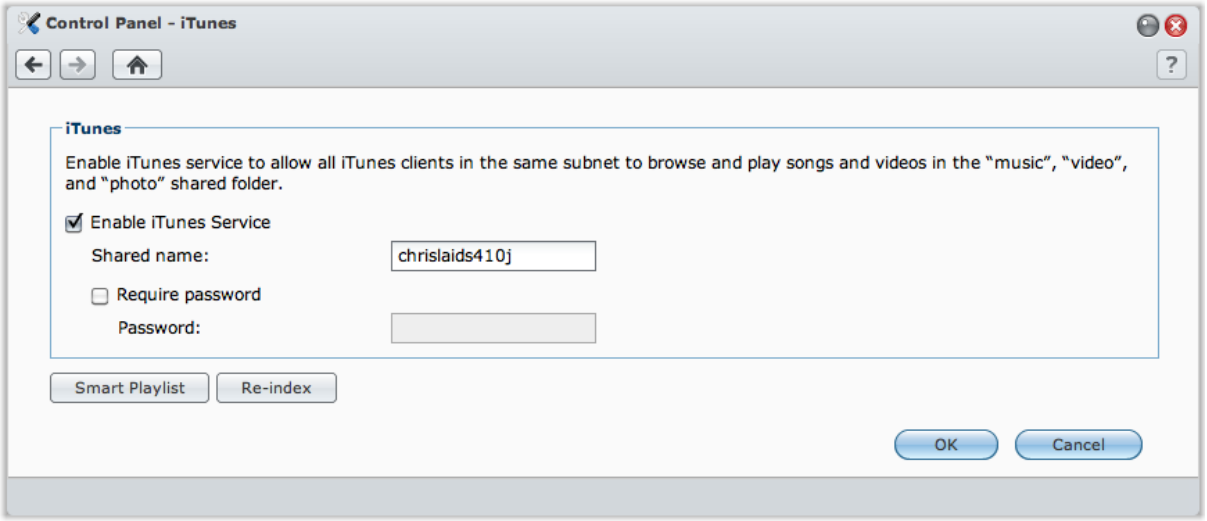
Synology DiskStation can pair up perfectly with Sony PS3, Xbox 360, and many other DMA devices. You can use those devices to browse and stream multimedia contents from your DiskStation to your stereo system and TV set.[1]

Note: For information about browsing media server's contents with DMA devices, see the documentation that came with your device.

[1] For recommended peripheral models, including hard drive, USB printer, DMA, and UPS, please visit **www.synology.com**.

Manage iTunes Service

Go to **Main Menu** > **Control Panel** > **iTunes** to use iTunes service. After it is enabled, all iTunes clients on the same local area network can browse and play songs or videos on your Synology DiskStation.



The following shared folders will be accessed by iTunes clients:

- **photo**
- **video**
- **music**

> ***Note:*** For privacy reasons, iTunes clients are not allowed to view videos in the **photo** shared folder.

The following formats will be supported by iTunes service:

- **Audio:** MP3, M4A, M4P
- **Video:** MOV, MP4, M4V
- **Playlist:** WPL, M3U

Enable iTunes Service

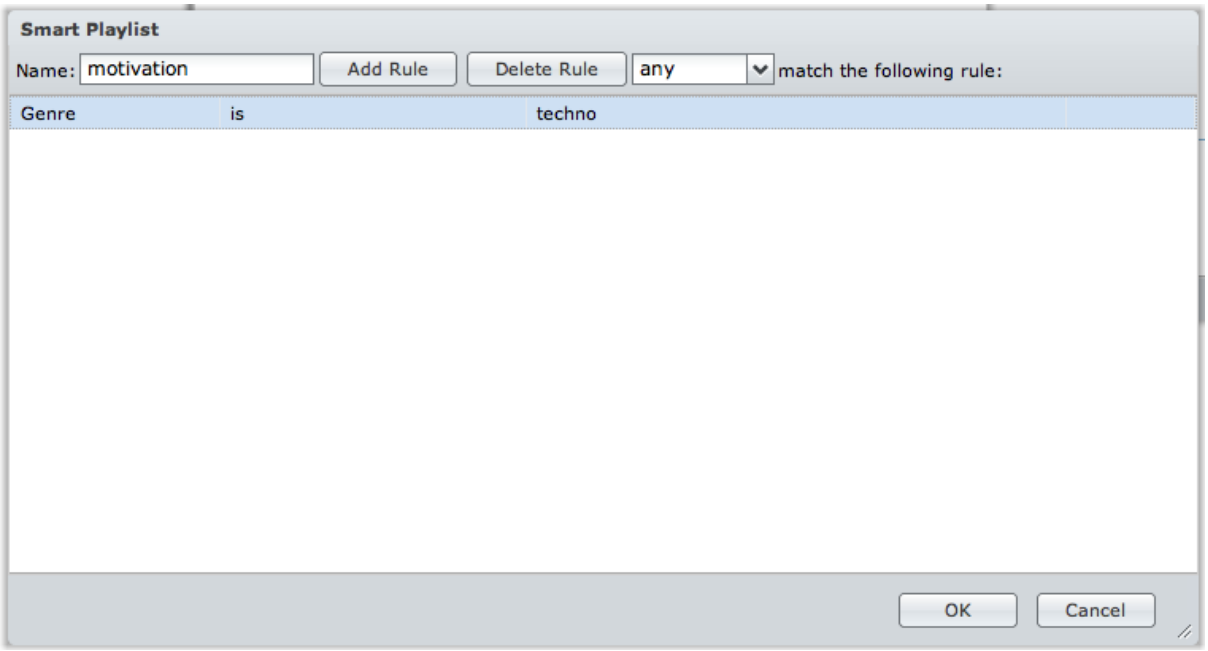
1 Tick **Enable iTunes service** and enter your **Shared name**.

2 Tick **Require password** and enter a password if you want iTunes users to enter a password before accessing your shared folders.

3 Click **OK**.

Use Smart Playlist

Click **Smart Playlist** to open the **Smart Playlist** window, where you can create and edit smart playlists on your Synology DiskStation.



A smart playlist can automatically include certain types of songs that match specific rules. iTunes clients will be able to play the smart playlist you created.

To create a smart playlist:

1 Click **Create**, name the playlist, and click **OK**.

2 Click **Add Rule** to set the rules.

3 Click **OK**.

To edit a Smart playlist:

1 Do one of the following to start editing:

- Double-click the item you want to edit.
- Select the item and click **Edit**.

2 Do any of the following to modify the rules:

- Modify the rules by choosing items from the drop-down menus.
- Click **Add Rule** if you want to add a rule.
- Select a rule and click **Delete Rule** if you want to delete the rule.

3 Click **OK**.

To delete a smart playlist:

1 Select the smart playlist you want to delete.

2 Click **Delete** and then click **Yes**.

Re-index Audio Files

Click **Re-index** to reconstruct the index structure of the audio files if you find missing files while browsing through Synology DiskStation with iTunes. The process will be executed in the background.

Chapter 16

Perform Advanced Management Tasks

Synology DiskStation Manager comes with a variety of management functions, allowing you to check system information, monitor system resources, receive notification, restore or upgrade DSM, upgrade packages, and more.

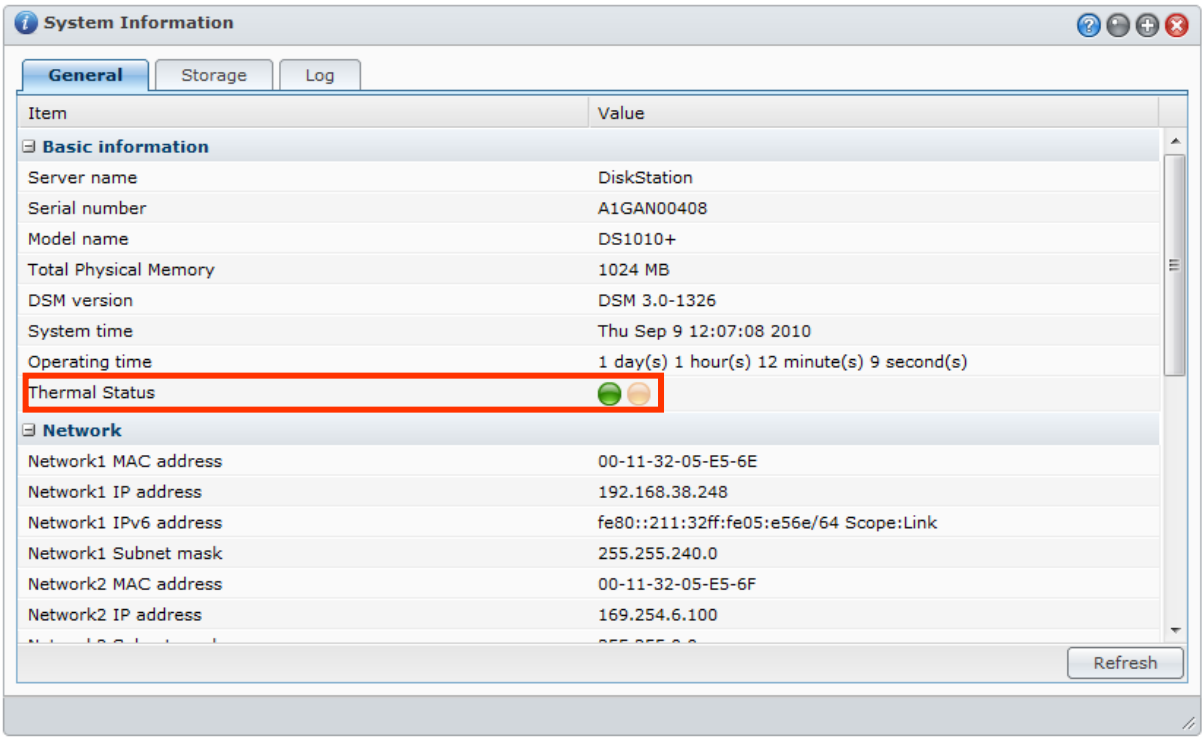
This chapter explains how to comprehend those management functions to make sure your Synology DiskStation is providing the best performance.

Check System Information

Go to **Main Menu** > **System Information** to check the system information.

Check General Information

Click **General** to obtain a status overview of your Synology DiskStation (including **Basic Information**, **Network**, **Time**, and **USB device**) and all other connected eSATA or USB devices (if any).



The DiskStation's thermal status is represented by green or orange lights:[1]

- **Green:** Thermal status is normal.
- **Orange:** DiskStation's thermal temperature is high. You need to cool down your DiskStation, or it will shut down to prevent system overheat.

The system's general information includes the following:

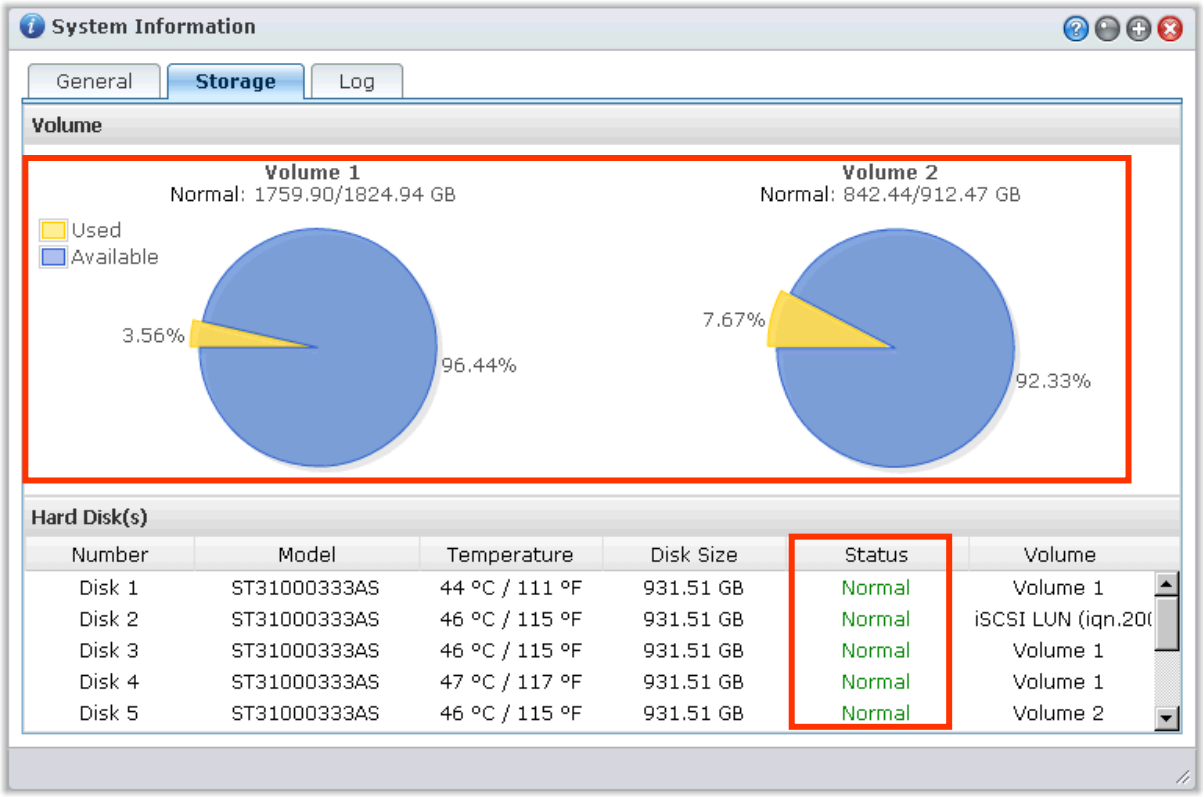
- **Basic Information**: You can see the detailed information about your Synology DiskStation here, including server name, serial number, model name, memory size, DSM version, system time, and operating time.
- **Network**: You can see the MAC address, IP address, and the other network information of your Synology DiskStation here.

[1] The information is available for specific models only.

- **Time**: You can see the time setting of your Synology DiskStation here, including time server and time zone. To set up your time server, see "Set Up Time" on Page 30.
- **Hard disk(s)**: You can see the model name, temperature, disk size, and disk status of your Synology DiskStation here.

Check Storage Information

You can check the free or used space of your DiskStation volumes and check the status of the hard disks.



To check volume usage:

From the pie charts, you can see the free or used space of DiskStation volumes.

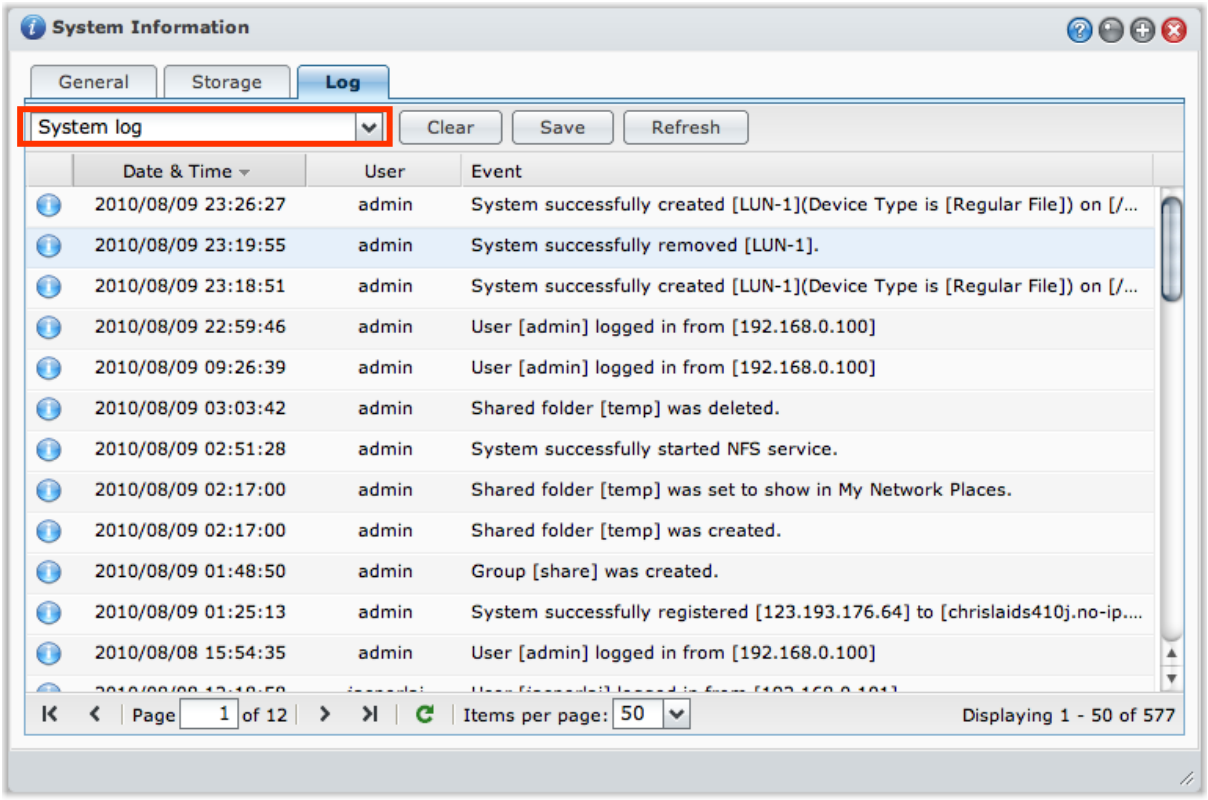
The hard drive status might be any of the following:

- **Normal**: System partition and volume are available for use on the hard drive.
- **Initialized**: System partition is established, but no volume has been created.
- **Not Initialized**: System partition and volume are not established on the hard drive.
- **No Disk Installed**: No disk is installed in the corresponding hard drive slot.
- **System Partition Failed**: System partition on the hard drive is unavailable. We recommend that you replace the hard drive.
- **Crashed**: Failed to access volume on the hard drive. We recommend that you replace the hard drive.

> ***Note:*** For the system to function normally, there should be at least one disk in **Normal** or **Initialized** status.

Check Logs

Click **Log** to check the system log, which records every move of DiskStation users.



To see the log records of specific service:

Use the drop-down menu to view the **System log**, the **Connection log**, the **Current Connection log**, the **FTP file transfer log**, the **File Station log**, the **File Browser log**, the **WebDAV log**, the **Backup log**, the **USB Copy log**[1], and the **Network Backup log**.

To delete log records:

1 Select the log item you want to delete from the drop-down menu.

2 Click **Clear** to delete the log records.

To save log records:

1 Select the log item you want to save from the drop-down menu.

2 Click **Save**.

3 The log records will be extracted to an **.html** file. You can choose to open it or save it to a disk.

To refresh the log:

Click **Refresh** to reload the page and get the most updated log records.

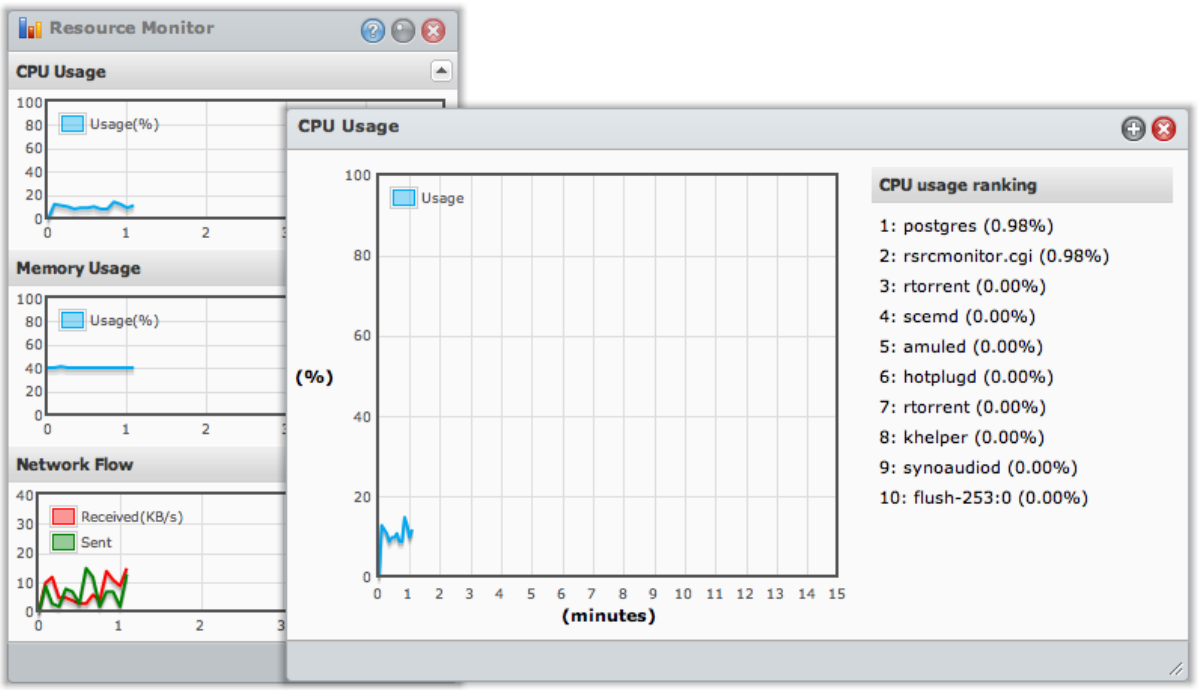
> ***Note:*** When the log size reaches its limit, the oldest record will be removed for space-saving consideration.

[1] USBCopy is supported on specific models only. See "Appendix A: Synology DiskStation Specifications" on Page 174 for more information.

Monitor System Resources

Go to **Information** > **Resource Monitor** to monitor system resources.

When you launch **Resource Monitor**, it will start to collect and display data. The data will be deleted when you quit the application. Resource data collected in the past will not be preserved.



The system resources include the following:

- **CPU Usage**: You can see the overall CPU usage as well as the CPU usage of each process in the order of decreasing CPU load. CPU load could be high when Resource Monitor is first launched, because the system needs to collect its resource data and load the UI page at the same time. Please note that keeping Resource Monitor launched will consume system resource.
- **Memory Usage**: Memory usage remains high because the system stores frequently accessed data in cache, so the data can be quickly obtained without accessing the hard drive. Cache memory will be released when overall memory is insufficient.
- **Network Flow**: The network flow chart displays the data sent and received rate in KB per second. If PPPoE is enabled, its transfer rate will also show up on the chart.

To see the details of any of the resources:

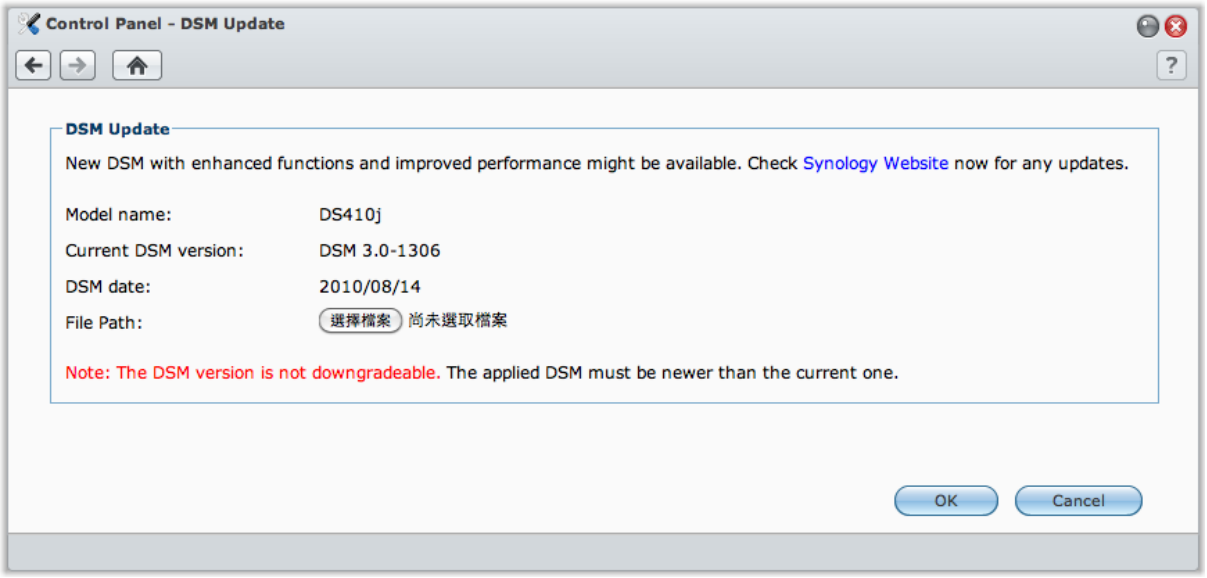
Click any of the resources to open a window that displays the details of resource usage.

Update DSM

Go to **Main Menu** > **Control Panel** > **DSM Update** to keep your Synology DiskStation up to date.

Before you start, do the following:

Go to http://www.synology.com/support/download.php to download the latest DSM patch file (.pat), and save it on your computer.



To update DSM:

1 Click **Browse** to locate the **.pat** file on your computer.

2 Click **OK** to begin uploading and updating DSM. The process might take a while to finish. When the update completes, Synology DiskStation will reboot automatically.

If you are having trouble updating DSM:

- Check if the updating process was interrupted by users, or other unexpected events, such as a power failure.
- Check the DSM version. You can only update with a newer DSM version.
- Download the DSM update again because the update file might be corrupted.

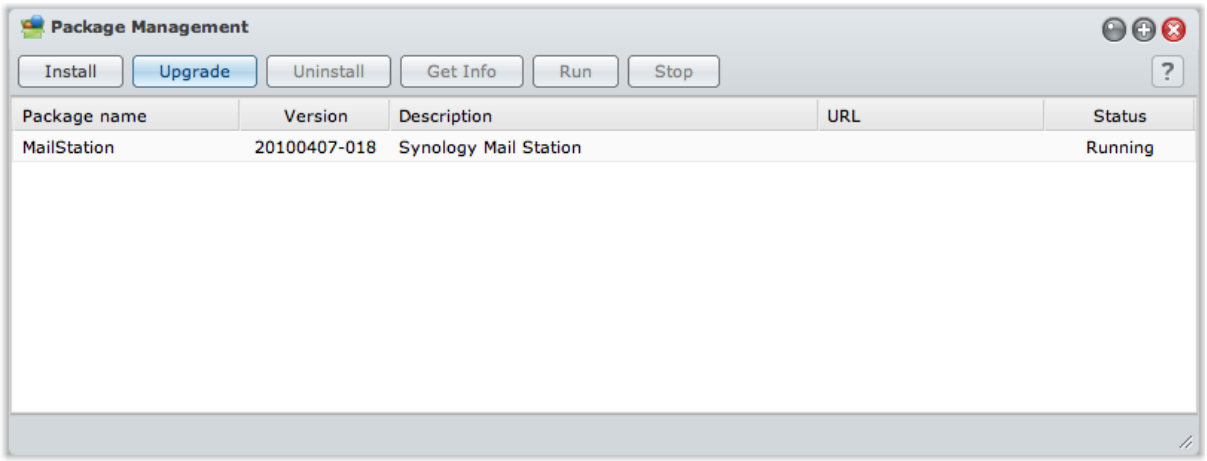
If the problem remains, please contact Synology.

Important: The data saved on the Synology DiskStation will not be erased during the updating process. However, for security reason, we strongly recommend that you back up the data first.

Manage Packages

Synology has integrated several useful third party applications into packages that can be installed and managed easily on your Synology DiskStation Manager.

Go to **Main Menu** > **Package Management** to manage the packages.



For the newest packages, go to http://www.synology.com/support/download.php and download the packages you want. The unzipped package file ends with the **.spk** extension.

To install a new package:

Click **Install** and follow the setup wizard to install a new package.

To upgrade a package:

Click **Upgrade** and follow the setup wizard to upgrade the current package to a newer version.

To uninstall an existing package:

Click **Uninstall**.

To get detailed information about the installed packages:

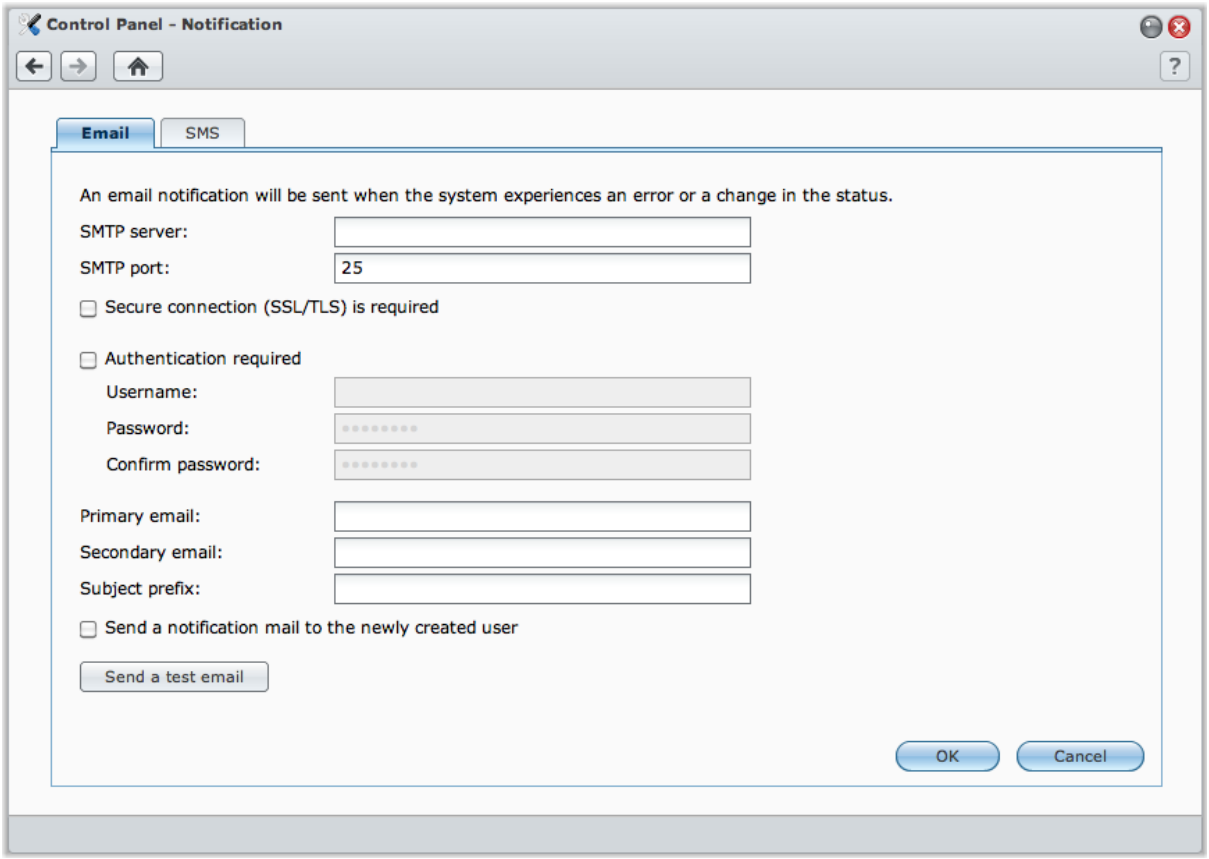
Click **Get Info**. The detailed information includes package description, version, maintainer and running status.

To run/stop package service:

Click **Run** or **Stop** if the function is available for the application.

Receive Event Notification

Go to **Main Menu** > **Control Panel** > **Notification** and set up Synology DiskStation to notify you via Email or text messages whenever an important event occurs (for example, status change, system error, lost connection, fan behavior change, or storage volume running out of space).



Receive Email Notification

Click the **Email** tab in the main section to set up email notification.

To set up Email notification:

1. Enter the SMTP server name or IP address.
2. By default, the SMTP port number is 25. Modify the number if you have specified a different SMTP port while setting up port forwarding rules.
3. If your SMTP server requires SSL/TLS connection, tick **Secure connection (SSL/TLS) is required**.
4. If your SMTP server requires authentication, tick **Authentication required**, and enter your username and password for the email server.
5. Enter the email address that will receive the notification mails in the **Primary email** or the **Secondary email** field.
6. Click **Send a test email** to see if your email settings are set up properly.
7. If you want to add a subject prefix in front of the notification mail subject, enter it in the **Subject prefix** field. The prefix helps you identify which DiskStation the notification mail was sent from.

More Information

About SMTP server's domain name:
The SMTP server can be an IP address or a domain name. If it is a domain name, please make sure a valid DNS server IP has been entered at **Main Menu** > **Control Panel** > **Network**, and make sure the server is on the Internet.

Receive SMS Notification

Click the **SMS** tab in the main section to set up SMS notification.

Notification events include:

- Volume has crashed. (Including internal volume, expansion unit, or system volume)
- Volume has degraded. (Including internal volume, expansion unit, or system volume)
- The expansion unit no longer exists.
- Internal disk has crashed.
- DDNS registration failed.
- UPS has been disconnected.
- The internal or expansion unit fan has stopped.
- The system has shut down due to overheating.

To set up SMS notification:

1. Tick **Enable SMS notifications**.
2. Select a SMS provider from the **SMS service provider** drop down list. The default service provider is "clickatell".
3. Click **Add** to create a new SMS provider configuration or click **Delete** to delete the selected SMS provider configuration.
4. In the **Username** field, enter the username of your SMS service account.
5. In the **Password** and **Confirm password** field, enter and confirm the password of your SMS service account.
6. Enter your **Primary phone number** or **Secondary phone number**. If both numbers are entered, SMS notification messages will be sent to both numbers.
7. If you do not wish to receive too many messages, tick **Enable SMS interval limit** and limit the number of notification messages to one message per the time interval you specified.
8. Click **Send a test SMS message** to send a test SMS message to the phone number you specified. If no message is received, it means the configuration is incorrect.
9. Click **OK** to save the configuration, or click **Cancel** to cancel the setup.

Note: Fees might apply to send SMS messages. Contact your local SMS service provider for more information.

To create a SMS provider configuration:

1. Click **Add**.
2. In the **Provider name** field, enter the name of your SMS service provider.
3. In **SMS URL** field, enter a SMS URL with the message content set to "Hello world." You can obtain the SMS URL from your SMS service provider.
4. Click **Next**.
5. The system will break down the SMS URL into several parameters. Define each parameter by selecting the corresponding category. Each parameter category can be used only once except **Other**.

More Information

SMS URL: case sensitive and must be between 1 and 500 Unicode characters. The number of parameters must be between 4 and 10. This SMS URL is only for setup purposes. No SMS message will be sent after setup is completed. The format of this URL is provided by the SMS service provider, and the URL must include the following parameters: username, password, destination phone, and message content. Using Clickatell as an example, a possible URL is: https://api.clickatell.com/http/sendmsg?user=TestUser&password=TestPassword&api_id=3148203&to=886123456789&text=Hello+world. Please note that in "message content" parameter, the space between "Hello" and "world" will be replaced by the particular character defined by the service provider.

Reset admin's Password

If you forgot the password for **admin** and are therefore unable to log in to DSM, you can reset the password to blank and set a new password.

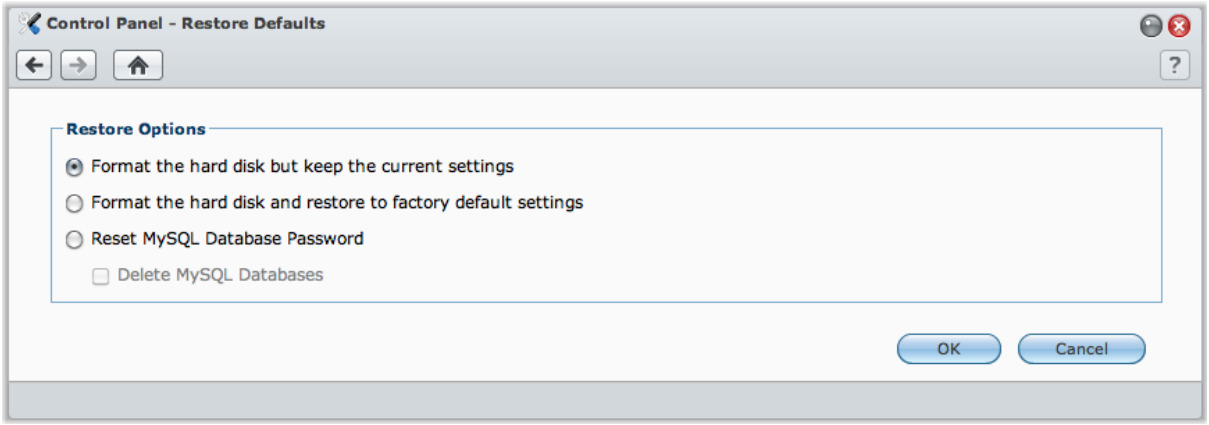
To reset admin's password:

Press and hold the **RESET** button on the back panel of your Synology DiskStation for 4 seconds until you heard a beep sound.

> ***Note:*** Other than resetting administrator's password, using the **RESET** button will also restore Synology DiskStation's IP and DNS to the default value.

Restore Synology DiskStation to Factory Defaults

Go to **Main Menu** > **Control Panel** > **Restore Defaults** if you want to restore your Synology DiskStation to factory defaults.



There are three restore options:

- **Format the hard disk but keep the current settings:** All user data in the hard drive will be deleted; whereas the system configurations will remain.
- **Format the hard disk and restore to factory default settings:** All user data in the hard drive will be deleted and the entire system will be restored to default.
- **Reset the password of MySQL database:** The password of the MySQL database will be reset.

  If you wish to delete your MySQL databases, check the **Delete MySQL databases** checkbox and click **OK**.

Reinstall Synology DiskStation

If you want to reinstall your Synology DiskStation without losing its data, you can use the **RESET** button on the back panel.

To reinstall Synology DiskStation:

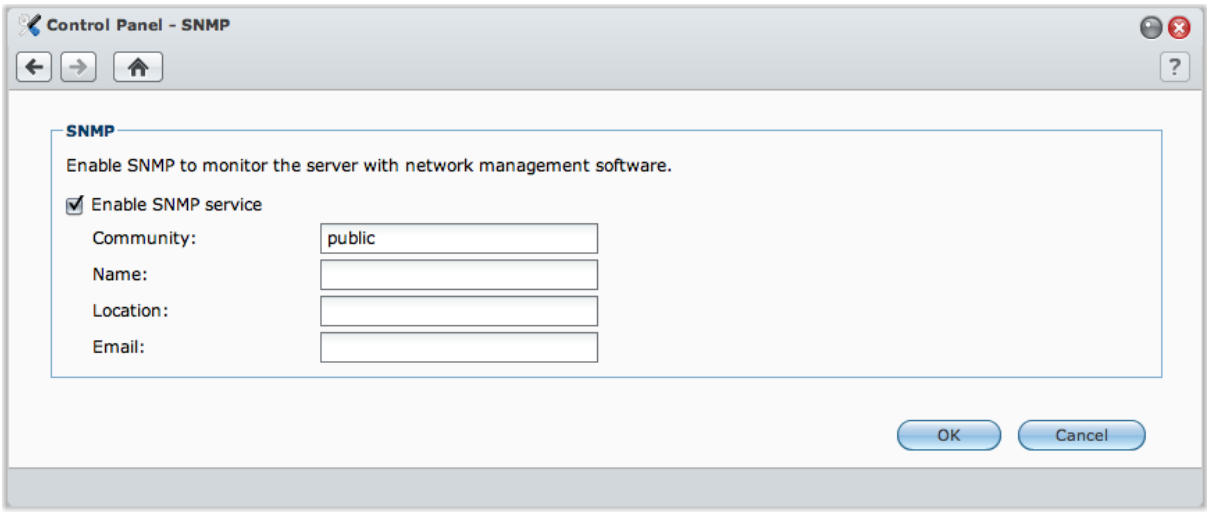
1. Press and hold the **RESET** button for about 4 seconds until the Synology DiskStation emits a beep sound.
2. Within the next 10 seconds, press and hold **RESET** button for about 4 seconds until the Synology DiskStation emits a beep sound.
3. Run Synology Assistant and follow the installation instructions in the **Quick Installation Guide** that came with your installation CD to set up the Synology DiskStation.

> ***Important:*** The data saved on the Synology DiskStation will not be erased during the reinstallation. However, for security reason, we strongly recommend that you back up the data first.

Enable SNMP Service

Go to **Main Menu** > **Control Panel** > **SNMP** to enable SNMP service, which allows users to monitor Synology DiskStation network flow with the network management software.

Currently, **SNMPv1** and **SNMPv2c** protocols are supported.



To enable SNMP service:

1 Tick **Enable SNMP service** and enter a **Community** name.

2 Enter the optional information to help you identify your Synology DiskStation: **Name**, **Location**, and **Email**.

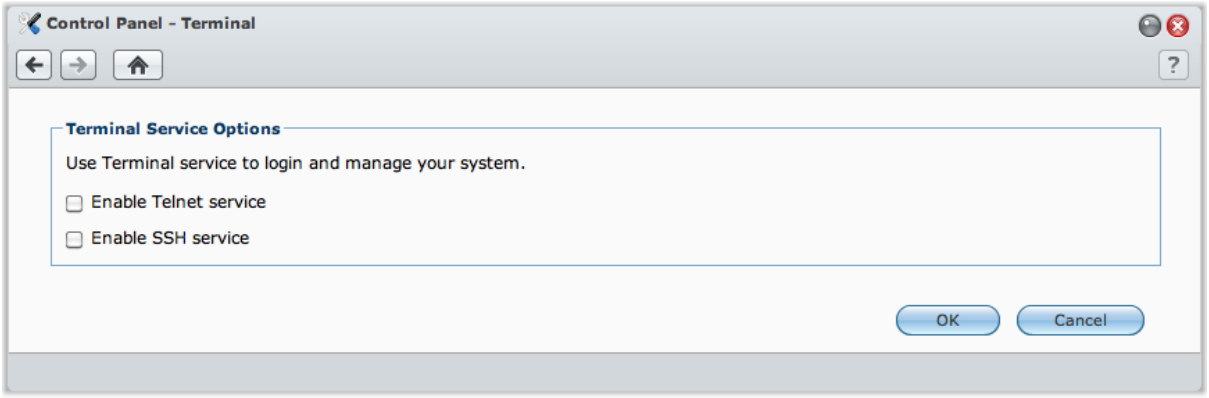
3 Click **OK**.

To disable the SNMP service:

Uncheck **Enable SNMP service**, and click **OK**.

Enable Terminal Services

Go to **Main Menu** > **Control Panel** > **Terminal** to enable Terminal service, allowing you to use Telnet or SSH to log in to Synology DiskStation and modify its settings.



To enable connection to Synology DiskStation via Telnet or SSH:

1 Do any of the following:

- **If you want to enable the Telnet service,** tick **Enable Telnet service**.
- **If you want to enable the SSH service,** tick **Enable SSH service**.

> ***Note:*** When you disable the SSH service, all SSH tasks will be terminated immediately. If you disable the SSH service while performing a backup task, perform the task again after the SSH service is disabled.

2 Click **OK**.

Important: Use the Terminal service with caution. Improper manipulation or modification to Synology DiskStation may result in system malfunction or data loss.

Chapter 17

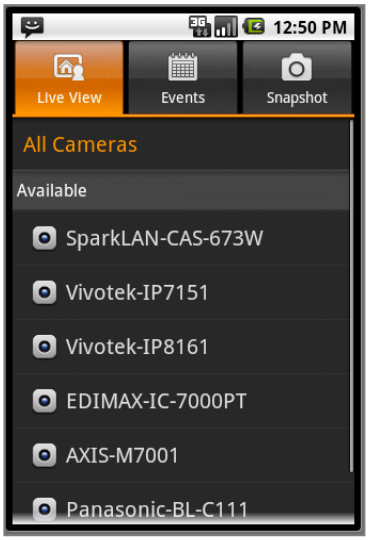
Communicate with Mobile Devices

As Internet access grows popular on mobile devices, Synology provides you with several creative alternatives to communicate with your Synology DiskStation using iPhone/iPod touch, Android phones, or other mobile devices.

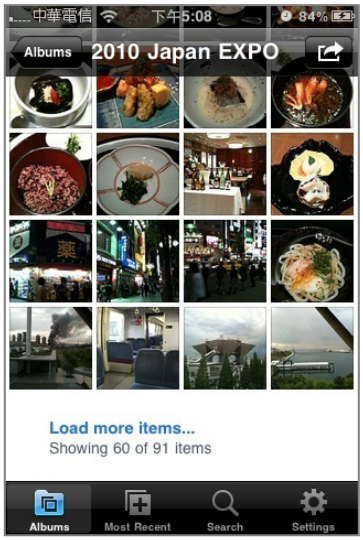
Use iPhone/iPod touch and Android Apps

The 3 Apps designed by Synology are now available on Apple's App Store or Android's Market, allowing you to communicate with Synology DiskStation wherever Wi-Fi access is available. You can manage your DiskStation files, music, photo and video albums, and even the surveillance videos on the go.

DS audio



DS cam



DS photo+

DS audio

DS audio allows you to access Audio Station with an iPhone/iPod touch or Android phone and listen to your favorite music on the go. Besides, the remote controller feature allows you to control Audio Station's music playback when there is a USB speaker attached to your DiskStation.

DS cam

DS cam allows users who own an iPhone/iPod touch or Android phone to live view their IP cameras, take snapshots, and view recorded events from your Surveillance Station whenever a network connection is available.

DS photo+

DS photo+ allows you to access Photo Station with an iPhone/iPod touch or Android phone and share your precious moments on the go. Download and save photos from Photo Station to your mobile device so you can enjoy the flashbacks anytime anywhere. You can also use DS photo+ to upload snapshots or videos from your camera phone straight to Photo Station. Besides, you and your friends can interact by leaving comments on any photos, adding more fun to your photo sharing experiences.

Note: For more information about using those Apps, open any of them and tap **Settings** > **Document** > **Help**.

Use Other Mobile Devices

If you have a mobile device running on Windows Mobile 6.0 (with Internet Explorer Mobile or Opera 9.0 or later), Symbian OS 9.1 (with S60 3rd Edition or later), or iPhone OS 2.3.1 or later, you can use the device to log in to Synology DiskStation to view photos with Mobile Photo Station and read supported file formats with Mobile File Station around the world where Internet access is available.

Appendix

A

Synology DiskStation Specifications

For the most recent product specification, please visit www.synology.com.

1-Bay Models

Item	DS110j	DS110+	DS111
Internal HDD	3.5 SATA (II) x 1	3.5 SATA (II) x 1	3.5 SATA (II) x 1
Max. Capacity	2TB	2TB	2TB
Hot Swappable HDD	No	No	No
External HDD Interface	USB x 3	USB x 3 eSATA x 1	USB x 3 eSATA x 1
LAN Port	Gigabit x 1	Gigabit x 1	Gigabit x 1
USBCopy	Yes	Yes	Yes
System Fan (mm)	x 1 (50 x 50)	x 1 (50 x 50)	x 1 (50 x 50)
Size (HxWxD) (mm)	160 x 63 x 218	160 x 63 x 218	160 x 63 x 218
Weight (Kg)	0.81	0.81	0.81
Supported Clients	• Windows 2000 onward • Mac OS X 10.3 onward • Ubuntu 9.04 onward		
Max. User Accounts	512	2048	2048
Max. Group Accounts	128	256	256
Max. Shared Folder	256	256	256
Max. Concurrent Connections	64	256	128
Max. Supported IP Cameras	5	12	8
File System	• EXT4 • EXT3 • FAT (External Disk, Read/Write) • NTFS (External Disk, Read/Write)		
Volume Type	• Basic		
Agency Certifications	• FCC Class B • CE Class B • BSMI Class B		
HDD Hibernation	Yes	Yes	Yes
Event Notification	Yes	Yes	Yes
NTP	Yes	Yes	Yes
FTP over SSL/TLS	Yes	Yes	Yes
HTTPS Connection	Yes	Yes	Yes
Windows ADS Domain	Yes	Yes	Yes
iSCSI	Yes	Yes	Yes
Scheduled Power On/Off	Yes	Yes	Yes
Wake on LAN	No	Yes	No

Item	DS110j	DS110+	DS111
Language Localization	• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk • Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu • Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文		
Power Consumption And Environment Requirements	• Line voltage: 100V to 240V AC • Frequency: 50/60Hz • Operating Temperature: 40 to 95˚F (5 to 35˚C) • Storage Temperature: 15 to 155˚F (-10 to 70˚C) • Relative Humidity: 5% to 95% RH • Maximum Operating Altitude: 10000 feet (3048m)		

2-Bay Models

Item	DS210+	DS710+	DS211j	DS211
Internal HDD	3.5 SATA (II) x 2	SATA (II) x 2	3.5 SATA (II) x 2	3.5 SATA (II) x 2
Max. Capacity	4TB (2 x 2TB hard drives)	4TB (2 x 2TB hard drives)	4TB (2 x 2TB hard drives)	4TB (2 x 2TB hard drives)
Hot Swappable HDD	No	Yes	No	No
External HDD Interface	USB x 3 eSATA x 1	USB x 3 eSATA x 1	USB x 3	USB x 3
LAN Port	Gigabit x 1	Gigabit x 1	Gigabit x 1	Gigabit x 1
USBCopy	Yes	Yes	Yes	Yes
System Fan (mm)	x 1 (70 x 70)	x 1 (80 x 80)	x 1 (70 x 70)	x 1 (70 x 70)
Size (HxWxD) (mm)	161 x 88 x 218	157 x 103.5 x 232	161 x 88 x 218	161 x 88 x 218
Weight (Kg)	0.98	1.69	0.98	0.98
Supported Clients	• Windows 2000 onward • Mac OS X 10.3 onward • Ubuntu 9.04 onward			
Max. User Accounts	2048	2048	512	2048
Max. Group Accounts	256	256	128	256
Max. Shared Folder	256	256	256	256
Max. Concurrent Connections	256	512	64	128
Max. Supported IP Cameras	12	16	5	8
File System	• EXT4 • EXT3 • FAT (External Disk, Read/Write) • NTFS (External Disk, Read/Write)			
Volume Type	• Basic • JBOD • RAID 0 • RAID 1			
Agency Certifications	• FCC Class B • CE Class B • BSMI Class B			
HDD Hibernation	Yes	Yes	Yes	Yes
Event Notification	Yes	Yes	Yes	Yes
NTP	Yes	Yes	Yes	Yes
FTP over SSL/TLS	Yes	Yes	Yes	Yes
HTTPS Connection	Yes	Yes	Yes	Yes

Item	DS210+	DS710+	DS211j	DS211
Windows ADS Domain	Yes	Yes	Yes	Yes
iSCSI	Yes	Yes	Yes	Yes
Scheduled Power On/Off	Yes	Yes	Yes	Yes
Wake on LAN	Yes	Yes	No	No
Language Localization	• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk • Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu • Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文			
Power Consumption And Environment Requirements	• Line voltage: 100V to 240V AC • Frequency: 50/60Hz • Operating Temperature: 40 to 95˚F (5 to 35˚C) • Storage Temperature: 15 to 155˚F (-10 to 70˚C) • Relative Humidity: 5% to 95% RH • Maximum Operating Altitude: 10000 feet (3048m)			

4-Bay Models

Item	DS409slim	DS410	DS411j	DS411+	RS409	RS810+	RS810RP+
Internal HDD	2.5 SATA (II) x 4	3.5 SATA (II) x 4	3.5 SATA (II) x 4	3.5 SATA (II) x 4	3.5 SATA (II) x 4	SATA (II) x 4	SATA (II) x 4
Max. Capacity	4TB (4 x 1TB hard drives	8TB (4 x 2TB hard drives)	8TB (4 x 2TB hard drives)	8TB (4 x 2TB hard drives)	8TB (4 x 2TB hard drives)	8TB (4 x 2TB hard drives)	8TB (4 x 2TB hard drives)
Hot Swappable HDD	No	No	No	No	Yes	Yes	Yes
External HDD Interface	USB x 2 eSATA x 1	USB x 2 eSATA x 1	USB x 2	USB x 2 eSATA x 1	USB x 2 eSATA x 1	USB x 2 eSATA x 1	USB x 2 eSATA x 1
LAN Port	Gigabit x 1	Gigabit x 1	Gigabit x 1	Gigabit x 1	Gigabit x 2	Gigabit x 2	Gigabit x 2
USBCopy	Yes	No	No	No	No	No	No
System Fan (mm)	x 1 (60 x 60)	x 2 (80 x 80)	x 2 (80 x 80)	x 2 (80 x 80)	x 3 (40 x 40)	x 3 (40 x 40)	x 4 (40 x 40)
Power Fan (mm)	No	No	No	No	x 1 (40 x 40)	x 1 (40 x 40)	x 1 (40 x 40)
Size (HxWxD) (mm)	120 x 105 x 142	168 x 184 x 230	168 x 184 x 230	168 x 184 x 230	44 x 430.5 x 457.5	44 x 430.5 x 457.5	44 x 430.5 x 457.5
Weight (Kg)	0.66	2.23	2.23	2.23	7.1	7.1	9.68
Supported Clients	• Windows 2000 onward • Mac OS X 10.3 onward • Ubuntu 9.04 onward						
Max. User Accounts	1024	2048	1024	2048	2048	2048	2048
Max. Group Accounts	128	256	256	256	256	256	256
Max. Shared Folder	256	256	256	256	256	256	256
Max. Concurrent Connections	64	256	128	512	128	512	512

Item	DS409slim	DS410	DS411j	DS411+	RS409	RS810+	RS810RP+
Max. Supported IP Cameras	8	12	5	20	8	20	20
File System	• EXT4 • EXT3 • FAT (External Disk, Read/Write) • NTFS (External Disk, Read/Write)						
Volume Type	• Basic • JBOD • RAID 0 • RAID 1 • RAID 5 • RAID 5+Spare • RAID 6 • RAID 10						
Agency Certifications	• FCC Class B • CE Class B • BSMI Class B				• FCC Class A • CE Class A		
HDD Hibernation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Event Notification	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NTP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FTP over SSL/TLS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HTTPS Connection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Windows ADS Domain	Yes	Yes	Yes	Yes	Yes	Yes	Yes
iSCSI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scheduled Power On/Off	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wake on LAN	No	Yes	No	Yes	No	Yes	Yes
Language Localization	• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk • Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu • Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文						
Power Consumption And Environment Requirements	• Line voltage: 100V to 240V AC • Frequency: 50/60Hz • Operating Temperature: 40 to 95˚F (5 to 35˚C) • Storage Temperature: 15 to 155˚F (-10 to 70˚C) • Relative Humidity: 5% to 95% RH • Maximum Operating Altitude: 10000 feet (3048m)						

5-Bay Models

Item	DS1010+
Internal HDD	SATA (II) x 5
Max. Capacity	10TB (5 x 2TB hard drives)
Hot Swappable HDD	Yes
External HDD Interface	USB x 4 eSATA x 1
LAN Port	Gigabit x 2
USBCopy	No
System Fan (mm)	x 2 (80 x 80)
Power Fan (mm)	x 1 (40 x 40)
Size (HxWxD) (mm)	157 x 248 x 233
Weight (Kg)	4.25

Item	DS1010+
Supported Clients	• Windows 2000 Onward • Mac OS X 10.3 Onward • Ubuntu 9.04 onward
Max. User Accounts	2048
Max. Group Accounts	256
Max. Shared Folder	256
Max. Concurrent Connections	512
Max. Supported IP Cameras	20
File System	• EXT4 • EXT3 • FAT (External Disk, Read/Write) • NTFS (External Disk, Read/Write)
Volume Type	• Basic • JBOD • RAID 0 • RAID 1 • RAID 5 • RAID 5+Spare • RAID 6 • RAID 10
Agency Certifications	• FCC Class B • CE Class B • BSMI Class B
HDD Hibernation	Yes
Event Notification	Yes
NTP	Yes
FTP over SSL/TLS	Yes
HTTPS Connection	Yes
Windows ADS Domain	Yes
iSCSI	Yes
Scheduled Power On/Off	Yes
Wake on LAN	Yes
Language Localization	• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk • Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu • Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文
Power Consumption and Environment Requirements	• Line voltage: 100V to 240V AC • Frequency: 50/60Hz • Operating Temperature: 40 to 95°F (5 to 35°C) • Storage Temperature: 15 to 155°F (-10 to 70°C) • Relative Humidity: 5% to 95% RH • Maximum Operating Altitude: 10000 feet (3048m)

Limitations

- Each Synology DiskStation supports up to 2 USB printers.
- USBCopy function supports USB disks with FAT32 and NTFS file system.
- Some digital cameras are defined as a Still Image Device, such as Canon. For such devices, Synology DiskStation only supports USBCopy function (No USB share function).
- For Mac users, Synology DiskStation only supports USB printers with PostScript.

LED Indication Tables

1-Bay Models

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN	Green	Static	Gigabit Link
		Blinking	Network is active
		Off	Network is down
DISK / eSATA	Green	Static	Disk is normal
		Blinking	Disk is being accessed
		Off	No internal disk
USBCopy	Green	Static	USB disk detected
		Blinking	Copying data
		Off	No USB disk attached
Power	Blue	Static	Power ready
		Blinking	Booting up
			Shutting down
		Off	Power off

2-Bay Models

Most Models

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN	Green	Static	Gigabit Link
		Blinking	Network is active
		Off	Network is down
DISK / eSATA	Green	Static	Disk is ready and idle
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Static	Cannot read / write
USBCopy	Green	Static	USB disk detected
		Blinking	Copying data
		Off	No USB disk attached
Power	Blue	Static	Power ready
		Blinking	Booting up or
			Shutting down
		Off	Power off

DS710+

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume Normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN	Green	Static	Gigabit link
		Blinking	Network is active
		Off	Network is down
	Orange	Static	10/100MB link
		Blinking	Network is active
		Off	Network is down
HDD1 & HDD2	Green	Static	Disk ready
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Static	Cannot Read/Write
Power	Blue	Static	Power ready
		Blinking	Booting up
			Shutting down
		Off	Power off
USBCopy	Green	Static	USB disk detected
		Blinking	Copying data
		Off	No USB disk attached

4-Bay Models

DiskStations

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume Normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN	Green	Static	Gigabit Link
		Blinking	Network is active
		Off	Network is down
DISK 1~4	Green	Static	Disk ready
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Static	Cannot Read/ Write
Power	Blue	Static	Power ready
		Blinking	Booting up
			Shutting down
		Off	Power off

RackStations

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume Normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN	Green	Static	Gigabit Link
		Blinking	Network is active
		Off	Network is down
DISK 1~4	Green	Static	Disk ready
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Static	Cannot Read/ Write
Power	Green	Static	Power ready
		Blinking	Booting up
			Shutting down
		Off	Power off
RPS-STATUS[1]	Green	Static	Both power supplies are working
		Blinking	1 power supply not working
		Off	Power off

[1] RS810RP+ only

5-Bay Models

DS1010+

LED Indication	Color	Status	Description
STATUS	Green	Static	Volume Normal
		Off	HDD Hibernation
	Orange	Static	Available volume space < 1GB
		Blinking	Volume degraded or crashed
			No volume
LAN 1 & LAN 2	Green	Static	Gigabit link
		Blinking	Network is active
		Off	Network is down
	Orange	Static	10/100MB link
		Blinking	Network is active
		Off	Network is down
Hard drive Status Indicator (on tray)	Green	Static	Disk ready and idle
		Blinking	Disk is being accessed
		Off	No internal disk
	Orange	Static	Cannot Read/ Write
ALERT	Orange	Blinking	FAN fail or over temperature
		Off	System normal
Power	Blue	Static	Power ready
		Blinking	Booting up
			Shutting down
		Off	Power off

Troubleshooting

For any questions about managing your Synology DiskStation, go to **Main Menu** > **DSM 3.0 Help** or click the **Help** button (with a question mark) at the top-right corner of every window. For any questions other than that, please visit Synology Inc. website **www.synology.com** for further assistance.

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Section 7. Audit. Synology will have the right to audit your compliance with the terms of this EULA. You agree to grant access to Synology to facilities, equipment, books, records and documents and to otherwise reasonably cooperate with Synology in order to facilitate any such audit.

Section 8. Ownership. The Software is valuable property of Synology and its licensors and is protected by copyright and other intellectual property laws and treaties. Synology or its licensors own all right, title and interest in and to the Software and all copyright and other intellectual property rights in the Software.

Section 9. Limited Warranty. Synology warrants that for a period of ninety (90) days after either your (a) installation of the Software on Products that do not include pre-installed Software or (b) use of a Product that includes pre-installed Software, as applicable, (the "Warranty Period"), the Software will substantially conform to Synology's published specifications for the Software, if any, or otherwise set forth on the Web Site. Synology will use commercially reasonable efforts to, in Synology's sole discretion, either correct any such nonconformity in the Software or replace any Software that fails to comply with the foregoing warranty, provided that you give Synology written notice of such noncompliance within the Warranty Period. The foregoing warranty does not apply to any noncompliance resulting from any: (w) use, reproduction, distribution or disclosure not in accordance with this EULA; (x) any customization, modification or other alteration of the Software by anyone other than Synology; (y) combination of the Software with any product, services or other items provided by anyone other than Synology; or (z) your failure to comply with this EULA.

Section 10. Support. During the Warranty Period, Synology will make available to you the support services. Following the expiration of the applicable Warranty Period, support for Software may be available from Synology upon written request.

Section 11. Disclaimer of Warranties. EXCEPT AS EXPRESSLY SET FORTH ABOVE, SYNOLOGY AND ITS SUPPLIERS PROVIDE THE SOFTWARE "AS IS" AND WITH ALL FAULTS. SYNOLOGY AND ITS SUPPLIERS HEREBY DISCLAIM ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, ARISING BY LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, TITLE AND NONINFRINGEMENT, WITH REGARD TO THE SOFTWARE. WITHOUT LIMITING THE FOREGOING, SYNOLOGY DOES NOT WARRANT THAT THE SOFTWARE WILL BE FREE OF BUGS, ERRORS, VIRUSES OR OTHER DEFECTS.

Section 12. Disclaimer of Certain Damages. IN NO EVENT WILL SYNOLOGY OR ITS LICENSORS BE LIABLE FOR THE COST OF COVER OR FOR ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR SIMILAR DAMAGES OR LIABILITIES WHATSOEVER (INCLUDING, BUT NOT LIMITED TO LOSS OF DATA, INFORMATION, REVENUE, PROFIT OR BUSINESS) ARISING OUT OF OR RELATING TO THE USE OR

INABILITY TO USE THE SOFTWARE OR OTHERWISE UNDER OR IN CONNECTION WITH THIS EULA OR THE SOFTWARE, WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY EVEN IF SYNOLOGY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Section 13. Limitation of Liability. SYNOLOGY'S AND ITS SUPPLIERS' LIABILITY ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE SOFTWARE OR OTHERWISE UNDER OR IN CONNECTION WITH THIS EULA OR THE SOFTWARE IS LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT REGARDLESS OF THE AMOUNT OF DAMAGES YOU MAY INCUR AND WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY. The foregoing disclaimer of warranties, disclaimer of certain damages and limitation of liability will apply to the maximum extent permitted by applicable law. The laws of some states/jurisdictions do not allow the exclusion of implied warranties or the exclusion or limitation of certain damages. To the extent that those laws apply to this EULA, the exclusions and limitations set forth above may not apply to you.

Section 14. Export Restrictions. You acknowledge that the Software is subject to U.S. export restrictions. You agree to comply with all applicable laws and regulations that apply to the Software, including without limitation the U.S. Export Administration Regulations.

Section 15. U.S. Government License Rights. All Software provided to the U.S. Government is provided with the commercial license rights and restrictions described in this EULA. By installing, copying or using the Software, the U.S. Government agrees that the Software is "commercial computer software" or "commercial computer software documentation" within the meaning of FAR Part 12.

Section 16. Termination. Without prejudice to any other rights, Synology may terminate this EULA if you do not abide by the terms and conditions contained herein. In such event, you must cease use of the Software and destroy all copies of the Software and all of its component parts.

Section 17. Assignment. You may not transfer or assign your rights under this EULA to any third party. Any such transfer or assignment in violation of the foregoing restriction will be void.

Section 18. Applicable Law. Unless expressly prohibited by local law, this EULA is governed by the laws of the State of Washington, U.S.A. without regard to any conflict of law principles to the contrary. The 1980 U.N. Convention on Contracts for the International Sale of Goods or any successor thereto does not apply.

Section 19. Dispute Resolution. Any dispute, controversy or claim arising out of or relating to this Warranty, the Software or services provided by Synology with respect to the Software or the relationship between you and Synology will be resolved exclusively and finally by arbitration under the current commercial rules of the American Arbitration Association if you reside in the United States, except as otherwise provided below. In such cases, the arbitration will be conducted before a single arbitrator, and will be limited solely to the dispute between you and Synology. The arbitration, or any portion of it, will not be consolidated with any other arbitration and will not be conducted on a class-wide or class action basis. The arbitration shall be held in King County, Washington, U.S.A. by submission of documents, by telephone, online or in person as determined by the arbitrator at the request of the parties. The prevailing party in any arbitration or legal action occurring within the United States or otherwise shall receive all costs and reasonable attorneys' fees, including any arbitration fee paid by the prevailing party. Any decision rendered in such arbitration proceedings will be final and binding on the parties, and judgment may be entered thereon in any court of competent jurisdiction. You understand that, in the absence of this provision, you would have had a right to litigate any such dispute, controversy or claim in a court, including the right to litigate claims on a class-wide or class-action basis, and you expressly and knowingly waives those rights and agrees to resolve any disputes through binding arbitration in accordance with the provisions of this Section 19. If you do not reside within the United States, any dispute, controversy or claim described in this Section shall be finally resolved by arbitration conducted by three neutral arbitrators in accordance with the procedures of the R.O.C. Arbitration Law and related enforcement rules. The arbitration shall take place in Taipei, Taiwan, R.O.C., and the arbitration proceedings shall be conducted in English or, if both parties so agree, in Mandarin Chinese. The arbitration award shall be final and binding on the parties and may be enforced in any court having jurisdiction. Nothing in this Section shall be deemed to prohibit or restrict Synology from seeking injunctive relief or seeking such other rights and remedies as it may have at law or equity for any actual or threatened breach of any provision of this EULA relating to Synology's intellectual property rights.

Section 20. Attorneys' Fees. In any arbitration, mediation, or other legal action or proceeding to enforce rights or remedies under this EULA, the prevailing party will be entitled to recover, in addition to any other relief to which it may be entitled, costs and reasonable attorneys' fees.

Section 21. Severability. If any provision of this EULA is held by a court of competent jurisdiction to be invalid, illegal, or unenforceable, the remainder of this EULA will remain in full force and effect.

Section 22. Entire Agreement. This EULA sets forth the entire agreement of Synology and you with respect to the Software and the subject matter hereof and supersedes all prior and contemporaneous understandings and agreements whether written or oral. No amendment, modification or waiver of any of the provisions of this EULA will be valid unless set forth in a written instrument signed by the party to be bound thereby.

SYNOLOGY, INC.
LIMITED PRODUCT WARRANTY

THIS LIMITED WARRANTY ("WARRANTY") APPLIES TO THE PRODUCTS (AS DEFINED BELOW) OF SYNOLOGY, INC. AND ITS AFFILIATES, INCLUDING SYNOLOGY AMERICA CORP, (COLLECTIVELY, "SYNOLOGY"). YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS WARRANTY BY OPENING THE PACKAGE CONTAINING AND/OR USING THE PRODUCT. IF YOU DO NOT AGREE TO THE TERMS OF THIS WARRANTY, DO NOT USE THE PRODUCT. INSTEAD, YOU MAY RETURN THE PRODUCT TO THE RESELLER WHERE YOU PURCHASED IT FOR A REFUND IN ACCORDANCE WITH THE RESELLER'S APPLICABLE RETURN POLICY.

Section 1. Definitions. (a) "Category I Product" means Synology product models RS810+, RS810RP+, and RX410 (b) "Category II Product" means Synology product models DS1010+, DS710+, DS509+, DS508, RS409RP+, RS409+, RS409, RS408-RP, RS408, RS407, DX510, DX5 and RX4. (c) "Category III Product" means all other Synology product models purchased by Customer after March 1, 2008. (d) "Category IV Product" means all other Synology product models purchased by Customer before February 29, 2008. (e) "Customer" means the original person or entity purchasing the Product from Synology or an authorized Synology distributor or reseller. (f) "Product" means a Category I Product, Category II Product, Category III Product, or Category IV Product and any hardware incorporated into the product by Synology and any accompanying documentation. (g) "Software" means the Synology proprietary software that accompanies the Product when purchased by Customer, is downloaded by Customer at the Web Site, or is pre-installed on the Product by Synology, and includes any firmware, associated media, images, animations, video, audio, text and applets incorporated into the software or Product and any updates or upgrades to such software. (h) "Warranty Period" means: (i) the period commencing on the date the Product is purchased by Customer and ending (1) five years after such date for Category I Products; (2) three years after such date for Category II Products; or (3) two years after such date for Category III Products; or (4) one year after such date for Category IV Products. (i) "Web Site" means the Synology web site located at **www.synology.com**.

Section 2. Limited Warranty and Remedies

2.1 Limited Warranty. Subject to Section 2.7, Synology warrants to Customer that each Product (a) will be free of material defects in workmanship and (b) under normal use will perform substantially in accordance with Synology's published specifications for the Product during the Warranty Period. Synology warrants the Software as set forth in the accompanying end user license agreement provided with the Product, if any.

2.2 Product Registration. Customers may register Products with Synology and may obtain the manufacturing date for Category I Products, Category II Products and Category III Products at the Web Site. The failure to register a Product at the Web Site will not diminish the warranty rights set forth in Section 2.1. Synology is not responsible for Customer's failure to identify the manufacturing date of any Product.

2.3 Exclusive Remedy. If Customer gives notice of noncompliance with any of the warranties set forth in Section 2.1 within the applicable Warranty Period in the manner set forth below, then, upon verification of the noncompliance by Synology, Synology will, at Synology's option: (a) use commercially reasonable efforts to repair the Product, or (b) replace the noncomplying Product or part thereof upon return of the complete Product in accordance with Section 2.4 The foregoing sets forth Synology's entire liability and Customer's sole and exclusive remedy for any breach of warranty under Section 2.1 or any other defect or deficiency in the Product. Customer will reasonably assist Synology to diagnose and validate any nonconformity with the Product. The warranty set forth in Section 2.1 does not include: (1) any warranty relating to the Software; (2) physical installation or removal of the Product from Customer's site; (3) visits to Customer's site; (4) labor necessary to effect repairs or replace defective parts other than during Synology's or its contracted service providers' normal local business hours, exclusive of weekends and service providers' holidays; (5) any work with any third party equipment or software; (6) any warranty of the hard disk if installed by Customer or any other third party; or (7) any warranty of compatibility with the hard disk.

2.4 Return. Any Product returned by Customer under Section 2.3 must be assigned a Return Merchandise Authorization ("RMA") number by Synology before shipment and must be returned in accordance with Synology's then current RMA procedures. Customer may contact any authorized Synology distributor or reseller or Synology Support to obtain assistance in obtaining an RMA, and must provide proof of purchase and product serial number when asking for such assistance. For warranty claims, Customer must return the complete Product to Synology in accordance with this Section 2.4 to be eligible for coverage under this Warranty. Any Product returned without an RMA number, or any Product that has been disassembled (except under the direction of Synology) will be refused and returned to Customer at Customer's expense. Any Product that has been assigned a RMA number must be returned in the same condition as it was received from Synology to the address designated by Synology, freight pre-paid, in packaging sufficient to protect the contents thereof and with the RMA number prominently displayed on the outside of the box. Customer is responsible for insurance and risk of loss with respect to returned items until they are properly received by Synology. A Product issued a RMA number must be returned within fifteen (15) days after issuance of the applicable RMA number.

2.5 Replacement by Synology. If Synology elects to replace any Product under this Warranty set forth in Section 2.1, then Synology will ship a replacement Product at Synology's expense via the shipping method selected by Synology after receipt of the nonconforming Product returned in accordance with Section 2.4 and validation by Synology that the Product does not conform to the warranty. Replacement Product will be new or serviceably used, comparable in function and performance to the original Product and warranted for the remainder of the original Warranty Period or thirty (30) days after it is shipped to Customer, whichever period is longer Any Product found by Synology to be non-defective will be returned to Customer.

2.6 Support. During the Warranty Period, Synology will make available to Customer the support services. Following the expiration of the applicable Warranty Period, support for Products may be available from Synology upon written request.

2.7 Exclusions. The foregoing warranties and warranty obligations do not apply to any Product that (a) has been installed or used in a manner not specified or described in the Product specifications; (b) has been repaired, modified or altered by anyone other than Synology or its agent or designee; (c) has been in any way misused, abused, or damaged; (d) has been used with items not provided by Synology other than the hardware or software for which the Product is designed; or (e) otherwise fails to conform to the Product specifications and such failure is attributable to causes not within or under Synology's control. Further, the foregoing warranties will be void if (1) Customer

disassembles the Product except as authorized by Synology; (2) Customer fails to implement any correction, modification, enhancement, improvement or other update made available to Customer by Synology; or (3) Customer implements, installs or uses any correction, modification, enhancement, improvement or other update made available by any third party. The warranty set forth in Section 2.1 will terminate upon Customer's sale or transfer of the Product to a third party.

2.8 Disclaimer of Warranties. THE WARRANTIES, OBLIGATIONS, AND LIABILITIES OF SYNOLOGY AND THE REMEDIES OF CUSTOMER SET FORTH IN THIS WARRANTY ARE EXCLUSIVE AND IN SUBSTITUTION FOR, AND CUSTOMER HEREBY WAIVES, RELEASES AND DISCLAIMS, ALL OTHER WARRANTIES, OBLIGATIONS AND LIABILITIES OF SYNOLOGY AND ALL OTHER RIGHTS, CLAIMS AND REMEDIES OF CUSTOMER AGAINST SYNOLOGY, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, WITH RESPECT TO THE PRODUCT, ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES DELIVERED UNDER THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO ANY: (A) IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE; (B) IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR USAGE OF TRADE; (C) CLAIM OF INFRINGEMENT OR MISAPPROPRIATION; OR (D) CLAIM IN TORT (WHETHER BASED ON NEGLIGENCE, STRICT LIABILITY, PRODUCT LIABILITY OR OTHER THEORY). SYNOLOGY MAKES NO GUARANTEE AND SPECIFICALLY DISCLAIMS ANY WARRANTY THAT THE DATA OR INFORMATION STORED ON ANY SYNOLOGY PRODUCT WILL BE SECURE AND WITHOUT RISK OF DATA LOSS. SYNOLOGY RECOMMENDS THAT CUSTOMER TAKES APPROPRIATE MEASURES TO BACK UP THE DATA STORED ON THE PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY TO CUSTOMER.

Section 3. Limitations of Liability

3.1 Force Majeure. Synology will not be liable for, or be considered to be in breach of or default under this Warranty on account of, any delay or failure to perform as required by this Warranty as a result of any cause or condition beyond its reasonable control (including, without limitation, any act or failure to act by Customer).

3.2 Disclaimer of Certain Damages. IN NO EVENT WILL SYNOLOGY OR ITS SUPPLIERS BE LIABLE FOR THE COST OF COVER OR FOR ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR SIMILAR DAMAGES OR LIABILITIES WHATSOEVER (INCLUDING, BUT NOT LIMITED TO LOSS OF DATA, INFORMATION, REVENUE, PROFIT OR BUSINESS) ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE PRODUCT, ANY ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES PROVIDED UNDER THIS WARRANTY, WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY EVEN IF SYNOLOGY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

3.3 Limitation of Liability. SYNOLOGY'S AND ITS SUPPLIERS' LIABILITY ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE PRODUCT, ANY ACCOMPANYING DOCUMENTATION OR SOFTWARE AND ANY OTHER GOODS OR SERVICES PROVIDED UNDER THIS WARRANTY IS LIMITED TO THE AMOUNT ACTUALLY PAID BY CUSTOMER FOR THE PRODUCT REGARDLESS OF THE AMOUNT OF DAMAGES CUSTOMER MAY INCUR AND WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER THEORY. The foregoing disclaimer of certain damages and limitation of liability will apply to the maximum extent permitted by applicable law. The laws of some states/jurisdictions do not allow exclusion or limitation of certain damages. To the extent that those laws apply to the Product, the exclusions and limitations set forth above may not apply to Customer.

Section 4. Miscellaneous

4.1 Proprietary Rights. The Product and any accompanying Software and documentation provided with the Product include proprietary and intellectual property rights of Synology and its third party suppliers and licensors. Synology retains and reserves all right, title, and interest in the intellectual property rights of the Product, and no title to or ownership of any intellectual property rights in or to the Product, any accompanying Software or documentation and any other goods provided under this Warranty is transferred to Customer under this Warranty. Customer will (a) comply with the terms and conditions of the Synology end user license agreement accompanying any Software furnished by Synology or an authorized Synology distributor or reseller; and (b) not attempt to reverse engineer any Product or component thereof or accompanying Software or otherwise misappropriate, circumvent or violate any of Synology's intellectual property rights.

4.2 Assignment. Customer will not assign any of its rights under this Warranty directly, by operation of law or otherwise, without the prior written consent of Synology.

4.3 No Additional Terms. Except as expressly permitted by this Warranty, neither party will be bound by, and each party specifically objects to, any term, condition or other provision that conflicts with the provisions of this Warranty that is made by the other party in any purchase order, receipt, acceptance, confirmation, correspondence or otherwise, unless each party specifically agrees to such provision in writing. Further, if this Warranty conflicts with any terms or conditions of any other agreement entered into by the parties with respect to the Product, this Warranty will prevail unless the other agreement specifically references the sections of this Warranty that it supersedes.

4.4 Applicable Law. Unless expressly prohibited by local law, this Warranty is governed by the laws of the State of Washington, U.S.A. without regard to any conflict of law principles to the contrary. The 1980 U.N. Convention on Contracts for the International Sale of Goods or any successor thereto does not apply.

4.5 Dispute Resolution. Any dispute, controversy or claim arising out of or relating to this Warranty, the Product or services provided by Synology with respect to the Product or the relationship between Customers residing within the United States and Synology will be resolved exclusively and finally by arbitration under the current commercial rules of the American Arbitration Association, except as otherwise provided below. The arbitration will be conducted before a single arbitrator, and will be limited solely to the dispute between Customer and Synology. The arbitration, or any portion of it, will not be consolidated with any other arbitration and will not be conducted on a class-wide or class action basis. The arbitration shall be held in King County, Washington, U.S.A. by submission of documents, by telephone, online or in person as determined by the arbitrator at the request of the parties. The prevailing party in any arbitration or legal action occurring within the United States or otherwise shall receive all costs and reasonable attorneys' fees, including any arbitration fee paid by the prevailing party. Any decision rendered in such arbitration proceedings will be final and binding on the parties, and judgment may be entered thereon in any court of competent jurisdiction. Customer understands that, in the absence of

this provision, Customer would have had a right to litigate any such dispute, controversy or claim in a court, including the right to litigate claims on a class-wide or class-action basis, and Customer expressly and knowingly waives those rights and agrees to resolve any disputes through binding arbitration in accordance with the provisions of this Section 4.5. For Customers not residing within the United States, any dispute, controversy or claim described in this section shall be finally resolved by arbitration conducted by three neutral arbitrators in accordance with the procedures of the R.O.C. Arbitration Law and related enforcement rules. The arbitration shall take place in Taipei, Taiwan, R.O.C., and the arbitration proceedings shall be conducted in English or, if both parties so agree, in Mandarin Chinese. The arbitration award shall be final and binding on the parties and may be enforced in any court having jurisdiction. Nothing in this Section shall be deemed to prohibit or restrict Synology from seeking injunctive relief or seeking such other rights and remedies as it may have at law or equity for any actual or threatened breach of any provision of this Warranty relating to Synology's intellectual property rights.

4.6 Attorneys' Fees. In any arbitration, mediation, or other legal action or proceeding to enforce rights or remedies under this Warranty, the prevailing party will be entitled to recover, in addition to any other relief to which it may be entitled, costs and reasonable attorneys' fees.

4.7 Export Restrictions. You acknowledge that the Product may be subject to U.S. export restrictions. You will comply with all applicable laws and regulations that apply to the Product, including without limitation the U.S. Export Administration Regulations.

4.8 Severability. If any provision of this Warranty is held by a court of competent jurisdiction to be invalid, illegal, or unenforceable, the remainder of this Warranty will remain in full force and effect.

4.9 Entire Agreement. This Warranty constitutes the entire agreement, and supersedes any and all prior agreements, between Synology and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.